



EDITORIAL.

Welcome to 3DCreative Issue 23. Last month, we saw the Tuc-Tuc tutorial series draw to a close with the finale in our eightpart series, which can only mean one thing this month... Yep, that's right, we have another brand spanking new tutorial series lined up just for you, and it starts this very month! Flip to the back of this issue to find

the first parts of our all new, Environment Lighting Tutorial series, which does exactly what it says on the tin! We must firstly apologise however, as unfortunately we aren't able to bring you the Maya part of this series until the next issue, due to unforeseen set-backs for our Maya artist, but please don't fret as we will have BOTH parts good and ready for you for next month's issue! So all you Maya artists out there really won't want to miss that double-wammy!! We also have another announcement regarding our Complete Guide to Lighting (Lightwave) series, which will now be featured in next month's issue, too. As compensation for the delay with the next part of this series, Cesar is kindly giving you some free goodies, which are available for download on page 101, for you to play with until his return next month! We thank you for your patience this month and we hope you will stay tuned until normal service is resumed again next month! This month we also welcome back the popular feature in which we interrogate artists far and wide for their thoughts regarding questions that we at 3DCreative would quite simply like to know the answers to. This month we asked them, "Do you think art is a gift that you inherit...?". Turn to p46 to find out what they said! We'd also like to thank those readers out there who have kindly written in over the last month with regards to last month's 'Plea for Help'. It's great to know that the support is growing out there, and we are glad that some of you who were perhaps tempted by free copies from friends, co-workers, or dodgy websites in the past, are now choosing to say "No!" to such temptations and support Zoo Publishing instead! We hope that more and more of you will realise that this is the only way to go if we all want to see 3DCreative survive; we can't do it without your support, so our plea for help still stands: please do not illegally copy and redistribute this magazine. Thanks for taking the time to read this, and I hope you enjoy this month's issue!



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CONTRIBUTING ARTISTS

Every month, many creatives and artists around the world contribute to 3DCreative Magazine. Here, you can read all about them. If you would like to be a part of 3DCreative or 2DArtist Magazines, please contact:

ben@zoopublishing.com

3D Environment Lighting

These wonderful people are responsible for creating our new 3D Environment Lighting Tutorial series for 3DS Max, Cinema 4D, Lightwave, Maya (coming next month!) & Softimage XSi. Most of them have been with us since the Joan of Arc series, and all worked on the highly popular Swordmaster Series...





LUCIANO IURINO

Started back in 1994 with 3DStudio on MS-Dos as a Modeller/ Texture artist. In 2001 he co-founded PM Studios & still



works there as Lead 3D Artist. Recently he has developed the videogame, ETROM – The Astral Essence. He also works freelance for different magazines, web-portals, GFX & videogame companies. He recently left the 3DS Max environment to move on to XSI.

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Roman Kessler

Is a Freelance 3D

Artist, in Germany.
In '93 he made his
1st 3D model, using
a shareware 3D

software for DOS that

was very limited. He got addicted & started with Lightwave in '97. Since 2005 he has worked professionally as a Freelancer. He likes all 3D tasks equally, with little preference to modelling and texturing. Besides client-based work, he also works on personal animation projects.

www.dough-cgi.de





NIKI BARTUCCI

Is a freelance 3D

Modeller, in

Italy. She started

working in the field of

Computer Graphics in

2000 as an Illustrator



& Web Designer. In 2003, she started using 3D software such as C4D, & later 3DS Max. She has worked on ETROM - The Astral Essence, RPG video-game for PC, developed by PM Studios. She is currently working freelance & specialises in commercials.

niki@pikoandniki.com - www.pikoandniki.com



GIUSEPPE GUGLIELMUCCI

Is a freelance 3D Modeller/Animator.
He began using computers with the epoch of the vic20,
& Cinema 4D was

his first 3D software. He started working in the field of CG in 1999, in commercial design.

In 2003, he worked on ETROM - The Astral Essence, RPG video-game for PC, developed by PMstudios. He currently hopes to work in the video-games industry & develop his own game.

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WOULD YOU LIKE TO CONTRIBUTE TO 3DCREATIVE OR 2DARTIST MAGAZINE?

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HYUNG-JUN KIM (AKA K,JUN)

Is a 3D Artist, in Seoul, Korea. He majored in painting at college, taught himself 3D in 1997, and then

started working in the field of trailers. He became interested in game genre and ever since 2003 has been working for a games company. He currently works at NC Soft as Art Director for an online game call "Aion". http://www.kjun.org kjunorg@gmail.com



ROMY TESEI

Is a 3D Freelance Artist, in Italy. He began studying CG in 2000, and then started working freelance in 3D in 2004. His

favourite software is 3DS Max and V-Ray. He currently works as a freelancer in Architectural Visualization, but hopes one day to be working

> http://www.teseiromy.com info@teseiromy.com



RAYMOND YANG

Raymond Yang finished his Spatial Design degree at Auckland University of Technology, and moved to Melbourne

to study a Multimedia Design Master degree at Monash University. He currently works at Krome Studios as an Environment Artist. His hobbies include drawing, scale car model kits, 3D modelling, and he enjoys his weekends with his wife.

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3dcreative



JANIS
ANCITIS
Is a 20 year-old
student, currently
studying Public
Relations at university.
He started doing 3D
about 3 years ago with

the freeware Anim8or, and then moved to 3DS

Max 5. He later moved on to Max 7 and now

uses the latest Max version, 9. He particularly
loves the modelling process, and sees computer

graphics as his hobby for the time being,
although he'd like it to be his job one day, too.

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ARTHUR SACEK

Is a 3D Artist / Product
Designer / Freelancer,
in São Paulo, Brazil.
He started working
with 3D creating
visualizations of school



labs, and later got involved in other 3D projects, such as illustration, animation and games. Today, he works on a project for LEGO Education, where he's developing different LEGO models and a 3D system, based on XSI, to create the step-by-steps for each model. arthursacek@yahoo.com.br

http://br.geocities.com/arthursacek



ROBIN CHARLEY

Is 27 years old, and
lives in Jakarta,
Indonesia. He has
loved animation since
a child, and enjoys
traditional drawing

and painting. He studied graphics at Trisaksi
University and has since worked at Soraya
Intercine Films, MD Entertainment. He also
works on commercials, for TV programs, and for
animated company profiles. He plans to build a
3D Graphic & Animation studio in Jakarta.
www.weitastudio.com - weitastudio@yahoo.com





CESAR Alejandro Montero Orozco

Is a 3D Artist &
Computer Engineer,
in Zapopan, Jalisco,
Mexico. He believes



in the balance in life, and all of its aspects. He appreciates his health above anything else. His career goal is to tell compelling stories using CG in feature films.

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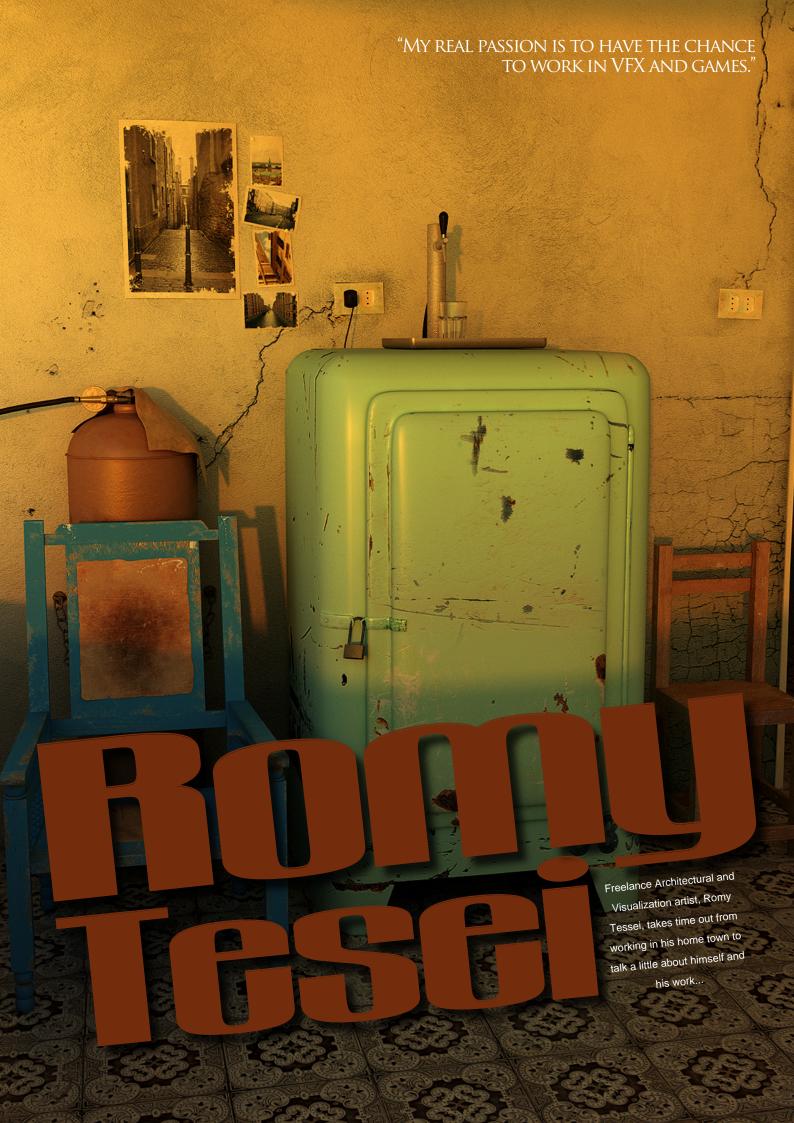
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Romy Tesei

Hello and thanks for talking to us. How did you begin in 3D?

I started studying CG in 2000 at a school in Milan. In the beginning, I worked as a developer with Macromedia Director, where I kept my passion for 3D. The result was that in 2004/06 my passion lead to my first job!

Your work is heavily architectural and visualization work. Now, is this the result of where you work in particular, or do you prefer the architectural side of 3D anyway?

I'm working freelance right now, and in my town I work particularly on architectural and visualization projects. However, my real passion is to have the chance to work in VFX and games.

What gives you the enthusiasm for creating photo-realistic renders?

In the beginning I liked checking jobs on the







Internet for all the big artists, and I was inspired by them and given the enthusiasm to try and imitate their tasks. Their abilities pushed me to study to try and obtain good results from my own work. Even now, I still have that same enthusiasm for creating good work and always do my very best.

Some of your work could be considered concept art. Do you like the design element of this?

Yes, I've been working with an Italian designer for a long time now and I often realise some design elements with him, too.

What does a regular day involve for you?

Actually, my job takes up many hours of my day. I'm always trying to find the time that I need to realise my personal works and where I can dream and improve both myself and my work.

But do you have any relaxing time or any hobbies? Any extreme sports?

One of my biggest passions is music. I have played guitars ever since I was just fifteen years old, and have always had fun composing music and songs. In the past, I have always played sports; football, basketball, athletics... but in the last few years the only sport I have done is sitting on the chair in front of my computer!







Do you have many personal projects?

I have some personal projects to keep working on, but time is just never enough. Professionally, I'm considering the possibility of working in a foreign country to learn and experience even more.

Where in the world would you like to work, and why?

I think that London is my favourite city because I once lived there for a while, and I've recently received some jobs offers from there but unfortunately, at the moment, I have been unable to accept them for personal reasons. Anyway, I really like travelling so any countries would be a good experience for my life and work!



Have you had a favourite project to date? If so, was it personal or commercial?

I'm very close to all of my works, but I don't think that I have yet realised my favourite project...

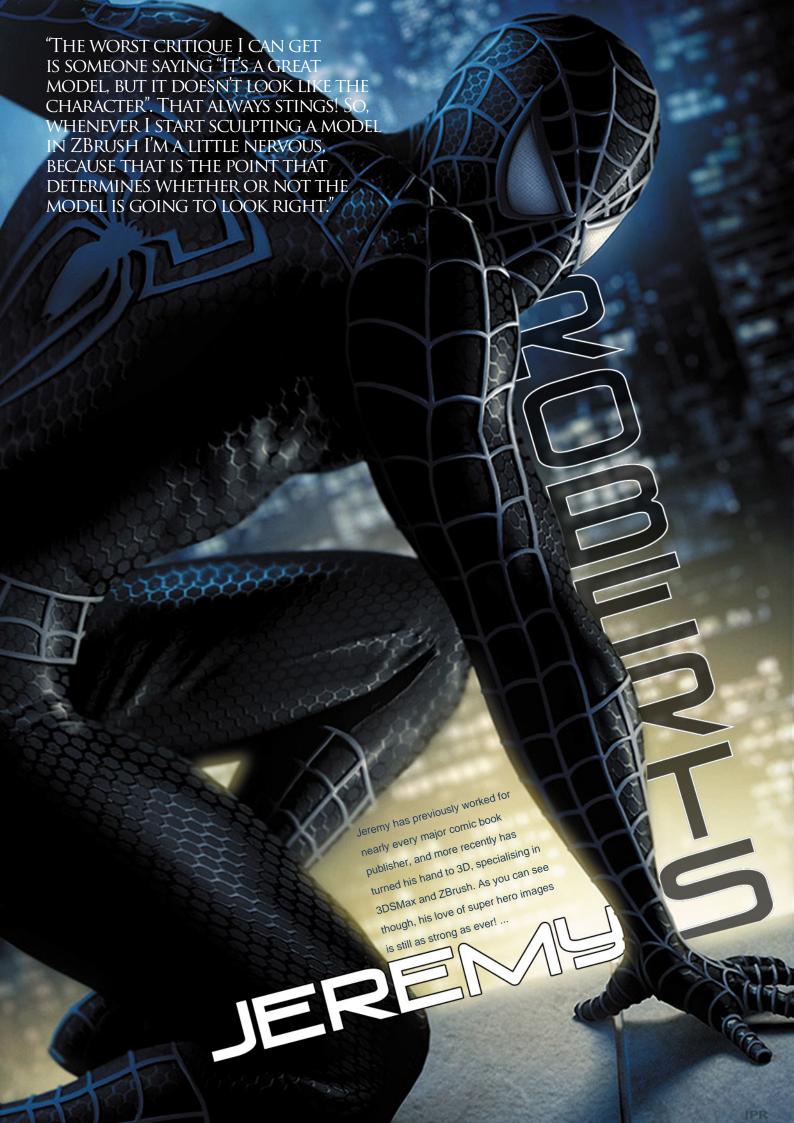
What would be a dream project for you?.

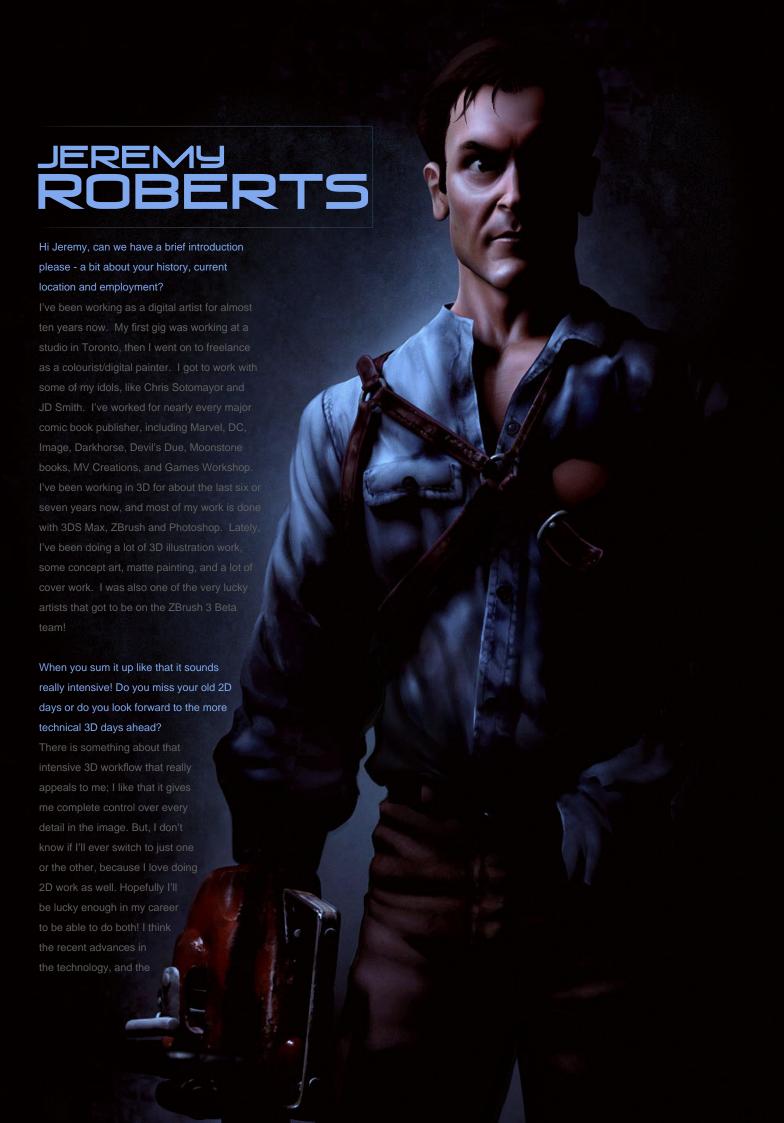
I've already written down that I would like to work on a short CG movie where I can mix my passion for both music and 3D. Simply trying to realise it would be a dream.









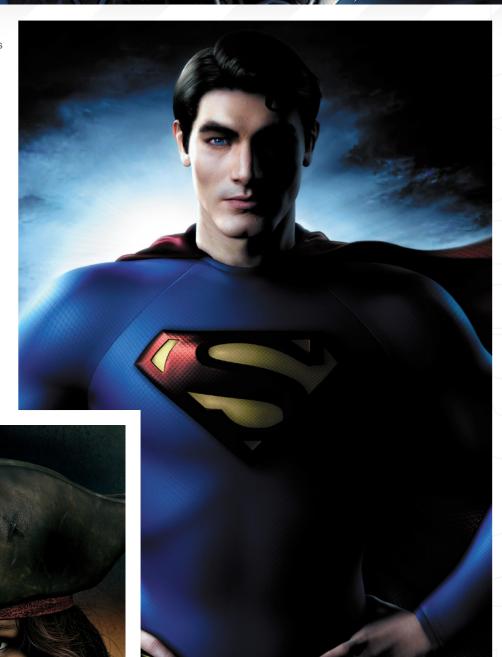


astounding quality of work that is coming out of the film and videogame industries, clearly shows that 3D will be the way of the future - I just hope there will always be a place for 2D art.

I notice you use the popular Deviantart.com website to present your portfolio: http://jprart. deviantart.com/gallery. Do you find this has advantages/disadvantages over having a personal website of your own?

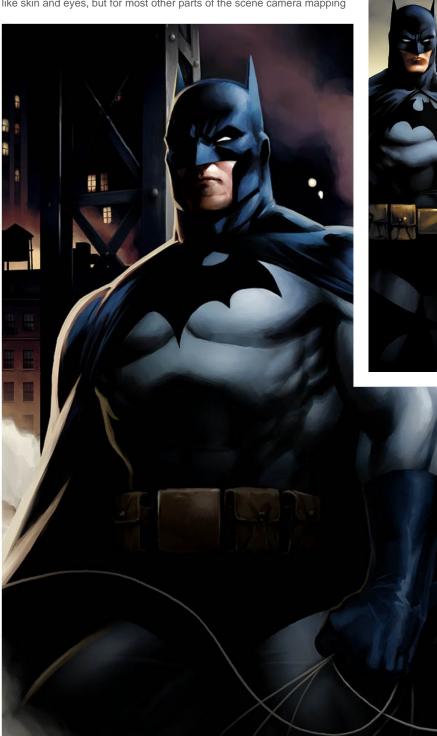
Deviantart is fantastic! It's perfect for any artist, because the page looks very professional and it's easy to post your work. They also have an incredible community, and the fan interaction is great.

Most of your 3D works state that you used 3DS Max, ZBrush and Photoshop. Can you tell us a bit about your working pipeline and how these packages work together?



Because most of my work is for illustration, I always begin with a sketch. I start by scribbling out a few rough ideas in Photoshop; as soon as I have the image I am looking for, I'll do a quick colour test to finalize exactly what I want the finished image to look like. Then, I trace over it with the pen tool and export that as an .ai file which can be imported into 3DS Max. I line up that vector image in the perspective viewport, lock the camera into position, and start assembling the scene. I've created several base models that serve as the starting point for most of my 3D work. The models are very low resolution, and have a simplistic edge flow that is easy to modify. If I'm creating a posed character, the first thing I will do is break apart the body at each of the joints, then position the limbs to

match the sketch, and using the bridge tool I re-connect all of the joints and export that mesh to be refined in ZBrush. The first thing I work on in ZBrush is the structure, and I make sure the anatomy is right before moving on to the detail pass. Once the high resolution details are finished I export a medium resolution .obj file with normal maps for the high res detail. With everything back in 3DS Max, I start adding the finishing touches like lighting and texturing. I usually texture my scene using camera mapping. I will paint specific texture maps for important things like skin and eyes, but for most other parts of the scene camera mapping





works just fine. Now that all the technical work is out of the way, I render out a few passes and start putting everything together in Photoshop. After a little bit of tweaking I have a finished image that very closely resembles what I had drawn in the initial sketch.

What are the advantages of using an .ai background to work from in your 3D scene, rather than the popular method of scanning and importing your sketch?

There are a lot of benefits to using an .ai background. First of all, a vector image is easier to render in the viewport, and being resolution independent means that you'll always be able to clearly see what you're working on. The lines are always visible, even in a wireframe view, making it easy to layout topology without having to make your object semi-transparent.



JEREMY ROBERTS Interview

3dcreative

Why do you prefer to re-create existing characters with your renders?

There is usually a lot of thought that goes into the decision. I try to take into account who the audience is going to be, and what kind of response that image would get. However, most of the character choice is just me - indulging my inner-fanboy. So, all of my work ends up being either superheroes, movie icons, or 80's cartoon characters! On the one level, re-creating an

existing character can be a lot of fun, but at the same time it is also very challenging. There is very little room for error when you're creating an existing character, as everyone already knows what that character looks like, and if it's not just right they'll let you know!

You mention the viewers will let you know if anything is not 100% spot on. Are there any particular aspects of re-creating existing

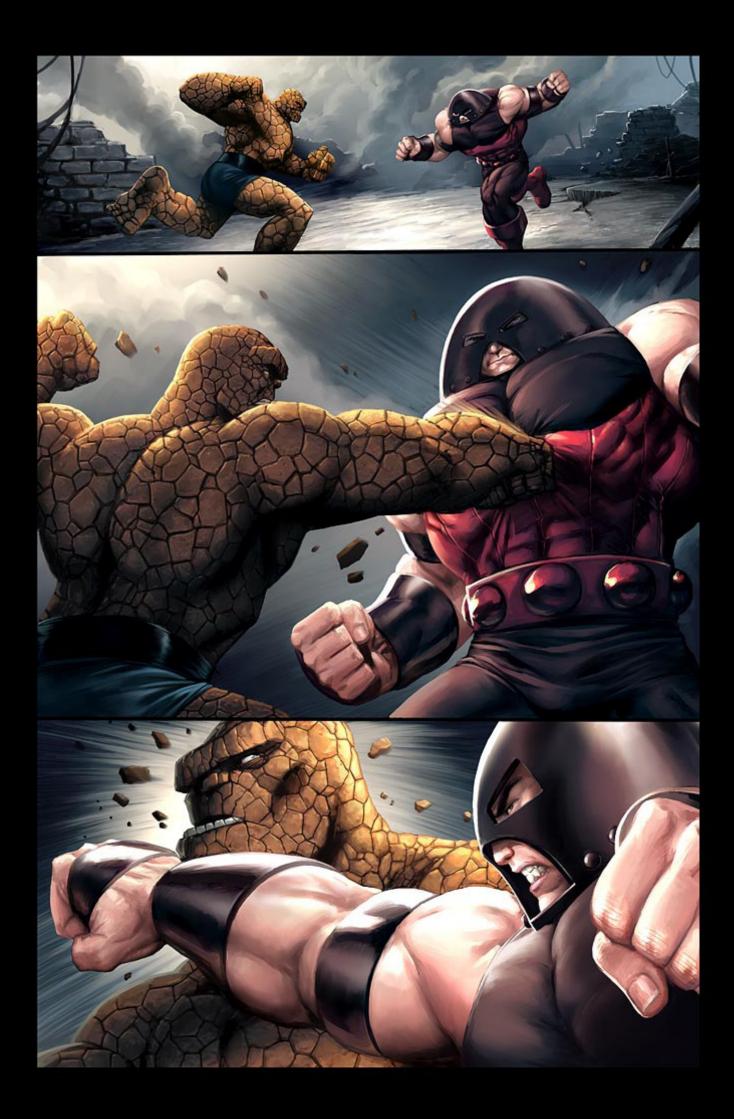
characters that cause you the most headaches in this regard?

The character likeness is always the most difficult part. Regardless of how much detail you put into your model, if it doesn't look like the character it all falls apart. The worst critique I can get is someone saying "It's a great model, but it doesn't look like the character". That always stings! So, whenever I start sculpting a model in ZBrush I'm a little nervous, because















3dcreative Interview K.JUN

KJUN

Hello K.jun, can you introduce yourself to our readers, please?

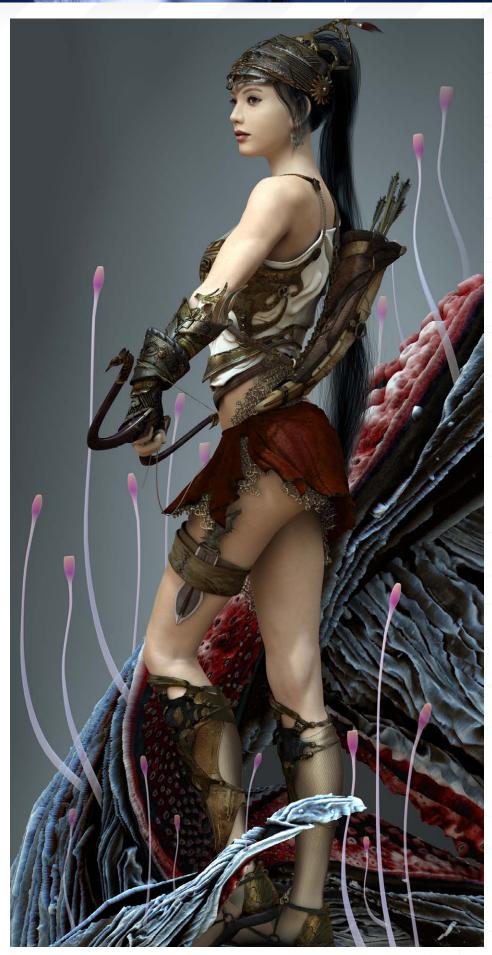
Hello, I'm K.jun and I'm currently living in Korea. I work for a game publishing and developing company called NCsoft, which is best known as the developer of the Lineage series and Guild Wars. Working in the CG department, I mostly participate in trailer productions and 3D illustrations for promotional materials. Since last year, I have been working in game development as the Art Director for NCsoft's next generation online game, Aion.

You majored in painting at college, but gave it all up to focus on a career in 3D, and are now an Art Director at NCSOFT. Have you ever been tempted to go back to your roots and do some digital painting?

I like challenges. I have encountered many challenges and am now confronted with the very attractive challenge of game development. I basically think that cinematics, games and illustration are pretty much the same thing; each has their unique limits and characteristics, but I think the fundamental basics behind them are the same. It's the art, and that's why I changed my major to painting from design. Whatever I do, I will have the desire for it, and later on I might just get back to where I began.

Do you think these challenges help you in getting the best out of your work?

Yes, it has been about ten years since I first started doing CG. Without all of the challenges that I have faced, I might have become bored with the work quite early on. I think it is these challenges that make the CG and artwork that I do more interesting.

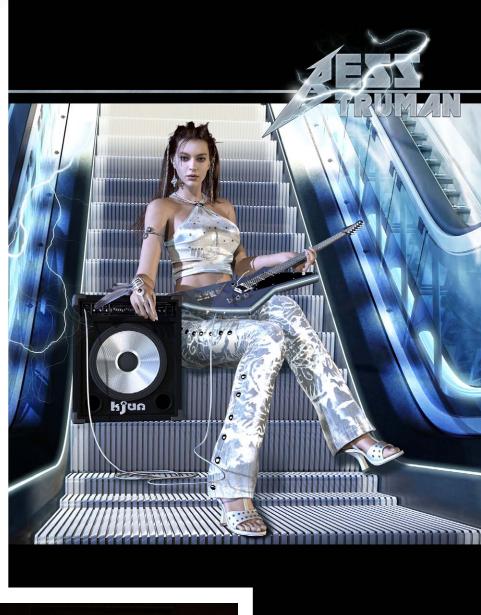


Can you tell us about a typical work day for you as an Art Director at NCSOFT?

I am responsible for the whole part related to art for the Aion game. Aion is a large scale MMORPG game. This game needs a vast scale world, hundreds of character designs, objects that create thousands of environments, and tens of thousands of character motions and FX. I am in charge of this whole process and I will also be creating promotional illustrations and trailers for Aion. My day consists of numerous meetings and there are things that I need to check and confirm everyday. I also participate in the concept design work necessary for the project within the small time that I have. Public release for AION is not very far away, and I am very busy with it. However, I am very happy because I am working with so many wonderful artists.

MMORPG seems to be the latest craze, especially with the hugely popular World of Warcraft and the new Lord of the Ring: Shadow of Angmar. Why do you think they have become so popular, and have you ever been tempted by any of them?

I think the biggest charm of MMORPG is that we can experience a whole new world that is quite different from the real world. In the past, we have indirectly experienced other worlds through movies and novels. Nowadays, with





these games, we can directly experience the new worlds as if we are actually living in them. It seems that hugely popular games present the users with an environment where they can get absorbed into the game world the most, and I believe that this is what interests them the most. Being as busy as I am nowadays, I don't have time to play any of these games, but I used to enjoy World of Warcraft.

From the small folds in a piece of cloth, to the amazing detail in a piece of armour, it looks like you spend a lot of time researching to get the right look for your images. On average, how long do you spend doing research for an image?



So when you're not 'playing God', creating worlds for the online game, Aion, how do you spend your time away from the computer scene?

I usually travel around or watch movies with my wife. When I am at home I watch a lot of movies, regardless of their genre. Movies are collections of imaginations that many people have worked hard on. I can get inspiration for my own work from movies.







By the sounds of it, you are a movie fanatic. Which movies have inspired you the most, & why?

I have been inspired mostly by Contact, Gladiator and Legends of the Fall. There have been a lot of CG movies recently, however, the reason that I have selected the above three movies is because they have all delicately described human beings.

What has been the best piece of advice that you have ever been given?

"Go a step further from the end of a 100 foot long pole, and a new world will show its face". There was a similar story in Indiana Jones and the Last Crusade, when someone stepped forward from the edge of a giddy cliff, and transparent stepping-stones appeared. This means that when you suffer hardship you should go a step further, instead of cowering. I was encouraged greatly thanks to this great saying when I felt like I was standing on the edge.



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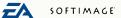












Fig Newtons

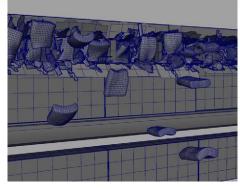
ANIMATED FIG NEWTONS STAR IN SPOT FROM DRAFT FCB, TIGHT PRODUCTIONS' DIRECTOR BRUCE DOWAD AND A52

More than 115 years after they were first introduced, Nabisco's famous Fig Newtons have been brought to life for the very first time in a new broadcast television spot entitled "Market." Created by advertising agency Draft FCB, director Bruce Dowad of Tight Productions, and the artists at Los Angeles visual effects design company A52, the new :30 spot debuted last week, and is set to continue airing in high-profile broadcast venues across the U.S. over the weeks ahead.

The cinematic spot features animated Fig
Newtons appearing in a live-action world,
showing the cookies escaping cookie jars in
homes and packages in grocery stores to march
en masse to a country fruit market and settle

into fruit baskets. Discovered there the next morning, the voice-over relates, "Fig Newtons: Packed with that real fruit taste, it's the cookie that thinks it's a fruit."

A52's Andy Hall was the project's visual effects and 3D supervisor. "As we learned through the agency's creative team, over the long history of this brand, Fig Newton has never brought the cookies to life," he said. "So, we worked closely with Bruce Dowad and the agency to capture the inner spirit of the cookie and to find interesting ways to bring them to life. This involved presenting them as endearing yet believable characters – and also heightening the spot's sense of adventure and excitement as much as possible. For the duration of the







commercial, we created the performances ranging from cookies escaping a cookie jar and embarking on a journey, to 3,000 marching down the country road returning to their home."

During pre-production, Hall and his colleagues worked with the director to design motion tests to show how the animated cookies could climb and jump. These tests were then used to design the live-action setup, creating a playground ideal for animating the spirited Fig Newtons. Hall, Lead Inferno Artist Raul Ortego, and A52's Producer Sarah Haynes, then participated in the location shoots with Dowad and his crew, including director of photography Bojan Bazelli, whose more than two dozen feature film credits include "The Ring," "Mr. and



Mrs. Smith" and New Line Cinema's forthcoming "Hairspray The Movie." During the production, A52's team recorded lighting information for the CG elements along with camera lens and movement information. In A52's studio, using Maya for modelling, animation and lighting, and Mental Ray for rendering, Hall worked closely with Bruce Dowad to really define the story through the performance of the Fig Newtons, supervising animation from shot to shot working with fellow staff artists Dan Guiterrez, Kirk Shintani, Paulo de Almada and Max Ulichney on animation, lighting and integration. "Additionally, Max built the model and texture of the Fig Newton," said Haynes, "and Kirk built the transition to the endtag, including the box model, texture, animation, lighting, shadows, etc." After Raul composited all the CG elements into the live-action footage in Inferno, he then worked closely with the director to perfect the spot's overall lighting and colour.

"First and foremost," Hall concluded, "I'm very proud to have had this opportunity to collaborate with Bruce Dowad and FCB. Together, I think we created a compelling and charming spot that really captures the wonderful character of the product using simple storytelling very effectively, where our contributions were key. These jobs are just a joy to work on... working with a great team of people both from the agency to production, to my team here at A52, and creating something that everyone is really proud of."

The agency's team consisted of Art Director Howie Ronay, Copywriter Gerald Cuesta and Producer Paddy Giordano. Production was overseen by Tight Productions' Executive Producer Jonathan Kar, and Line Producer Jeremy Barrett. Rob Sciarratta served as









A52's team also included Executive Producer Mark Tobin and Flame Artist Mike Bliss.

Established in 1997 as a home for the very latest high-end photo-real visual effects technologies, and the industry's most innovative and talented graphic design artists, West Hollywood visual effects and design company A52 creates award-winning imagery for the world's most visually ambitious commercial and television projects. The company's

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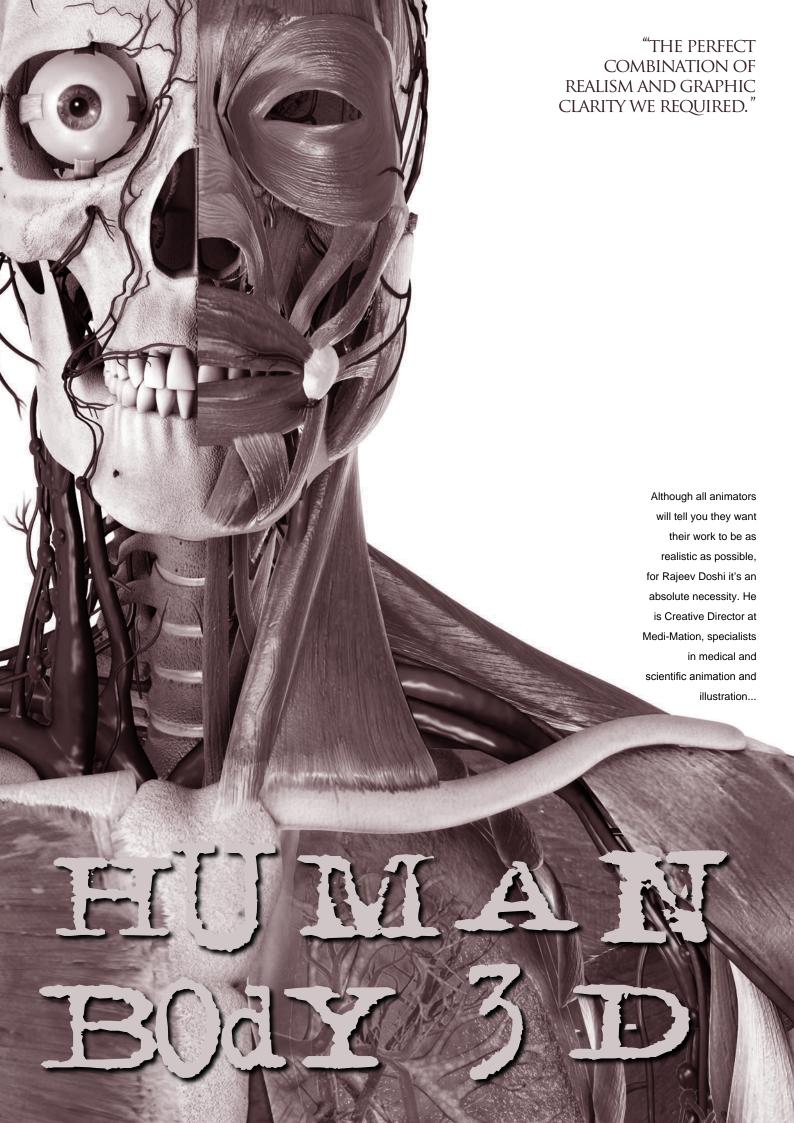
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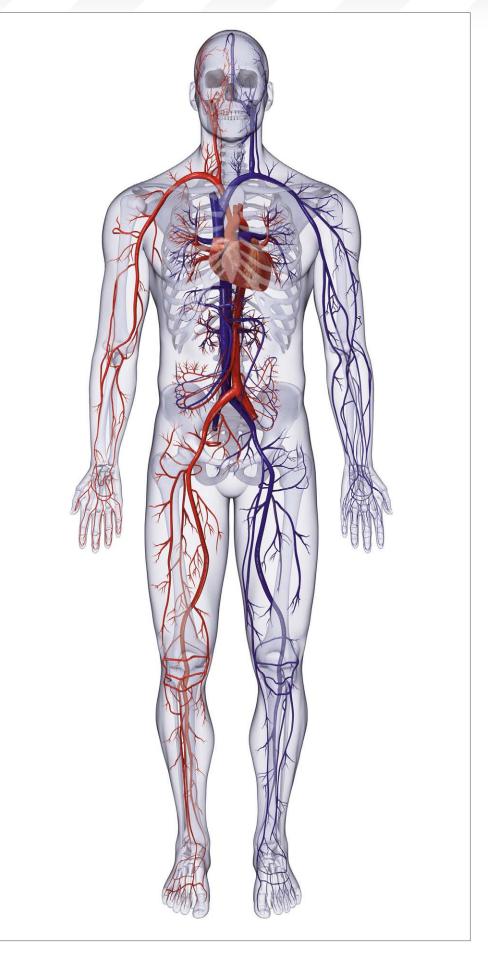
HUMAN BODY 3 D

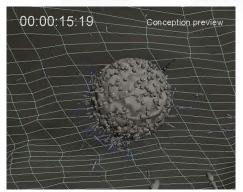
3DS MAX GOES TO MEDICAL SCHOOL FOR NEW HUMAN BODY BOOK

Although all animators will tell you they want their work to be as realistic as possible, for Rajeev Doshi it's an absolute necessity. He is Creative Director at Medi-Mation, specialists in medical and scientific animation and illustration. His latest project is for a book about the workings of the human body, involving over 150 3D illustrations and four minutes of high-end animation for a DVD. With such a massive amount of work to do, Autodesk 3ds Max software played a major part: "We've used 3ds Max for many, many years, so it's really familiar, and has an ever-expanding toolset that keeps us happy. We know it's stable and fast."

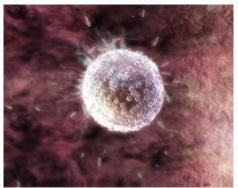
The project is the latest incarnation of the highly successful 'Human Body' book, published by Dorling Kindersley. The original book sold more than 700,000 copies, and Dorling Kindersley wanted to bring it up to date using 3D artwork rather than paintings and hand drawn artwork. Doshi is unusual for an animator because he started out in medicine; after a Ph.D in Cancer Therapy he realised he couldn't face life in a lab, so he retrained and put his medical knowledge and his animation know-how to work together.

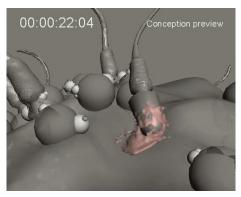
He says the first challenge of the project was the huge poly counts of the illustrations; the front cover alone consists of over one million polys and weighs in at 110Mb excluding textures, and a massive 200Mb including textures. "Luckily 3ds Max is very stable when handling stuff like this, and being able to use the Layer Manager enabled us to work quickly in the viewports."

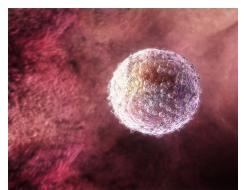


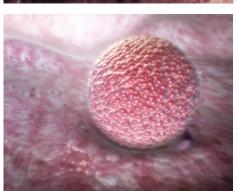






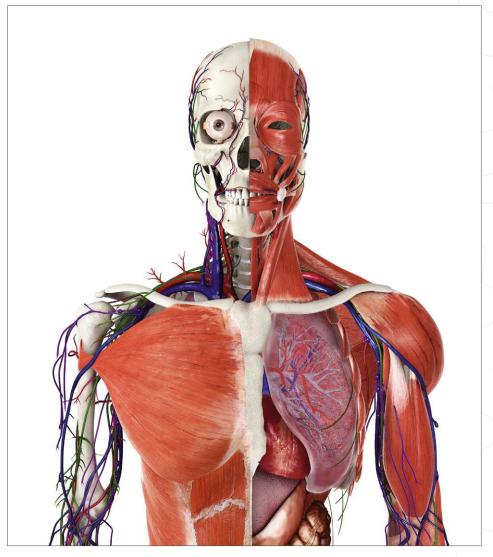






With at least four passes required for most of the illustrations including skin, organs, skeleton and a matte, producing detailed enough artwork within the tight timeframe was a major challenge. The team made the creative decision that the reader should be able to see the organs and systems, both in front of and behind the skeleton. However this meant 'ghosting' anything that went behind the skeleton rather than obscuring it. Added to this, many of the artworks would be created at A3 and needed to show information at a sub-organ, cellular and sub-cellular level. It was at this point says Doshi, that the initial excitement and euphoria wore off and panic set in!

Layer Manager helped with the complexity of the animation sequences. "One of the great things about 3ds Max is the huge number of plug-ins and scripts available," says Doshi. "This meant we were able to shave time off R&D by either using an off-the-shelf plug-in like Digimation Lightning, or a free 3ds Maxscript such as Nature Painter Tools from the hugely generous and talented 3ds Max community."



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HUMAN BODY 3D Medical School

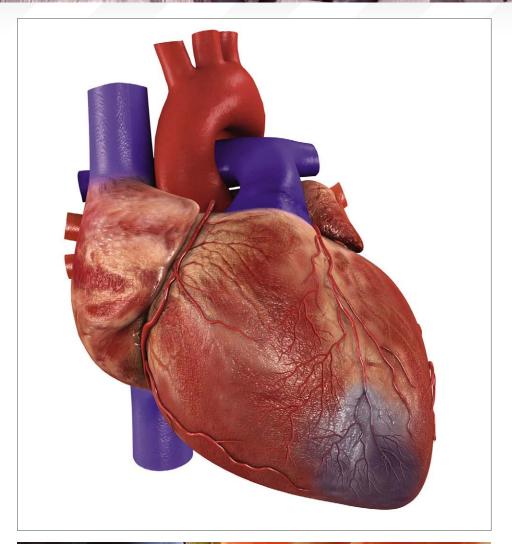
The animation team relied on 3ds Max's Backburner rendering system, which he describes as "rock solid". He stresses that "on a technical level, managing the sheer size of the data was the hardest thing. We leant heavily on Backburner, specifically its Strip rendering facility, which allows us to produce illustrations up to 3000 x 7000 pixels." And Doshi adds that a standout was 3ds Max's Skin Wrap modifier;

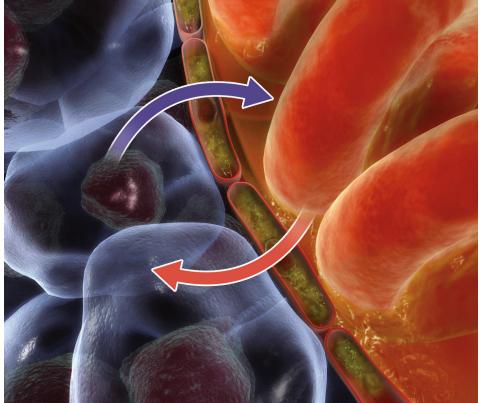
"very useful when you need to add elements to a beating heart – it's brilliant – it just works!"

Nearly every project that Medi-Mation undertakes contains complex particles effects, and Doshi believes that it's since PFlow was introduced that "we've been able to do the incredibly complex animations that really help lift the quality of the piece. And we all love 3ds Max's material editor – most of our work uses procedurally generated textures so we don't have issues with mapping and texture detail. The level of detail that you can get by digging deep into 3ds Max's materials editor is a godsend."

For the Human Body project, Pflow was put to good use showing a variety of different medical elements, including such intricacies as the fluid released by sperm when trying to get into an egg, the flocking and clustering behaviour of the sperm around the egg itself and particulate matter in all the aqueous environments. Another highlight is the animation of an electron charge moving across the surface of a neuron as an electrical pulse moves up and down. Pflow also came into its own for a shot showing microscopic smoke particles damaging the airways.

Doshi believes that "3ds Max's polygon editing tools are key to all the modelling work. In combination with subdivision surfaces to ensure that we can model everything we need quickly, cleanly and easily, but still be able to keep things looking suitably smooth and organic – every iteration of 3ds Max now has some small tweak to this toolset which really helps

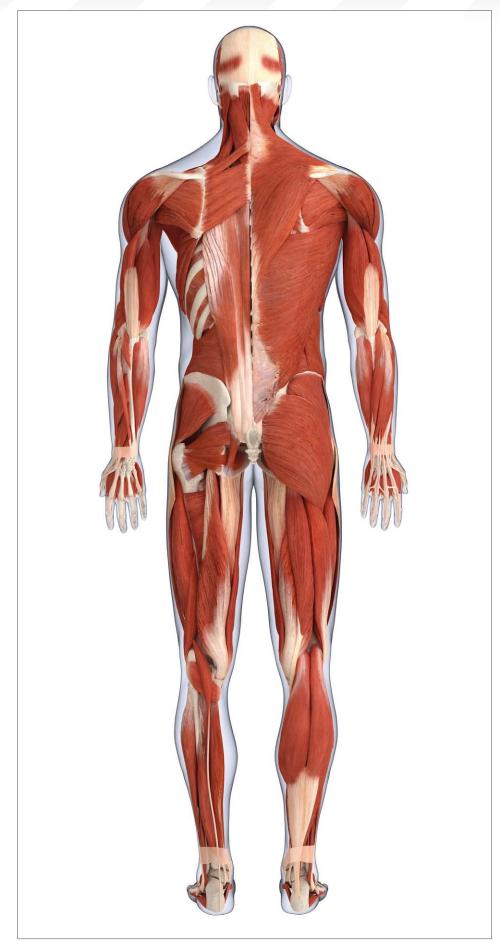


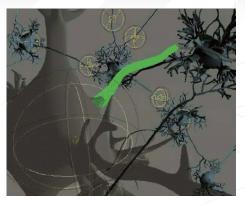


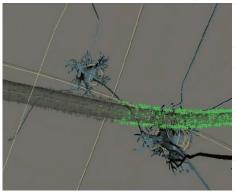
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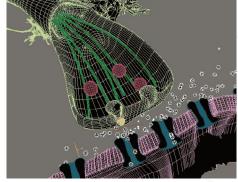
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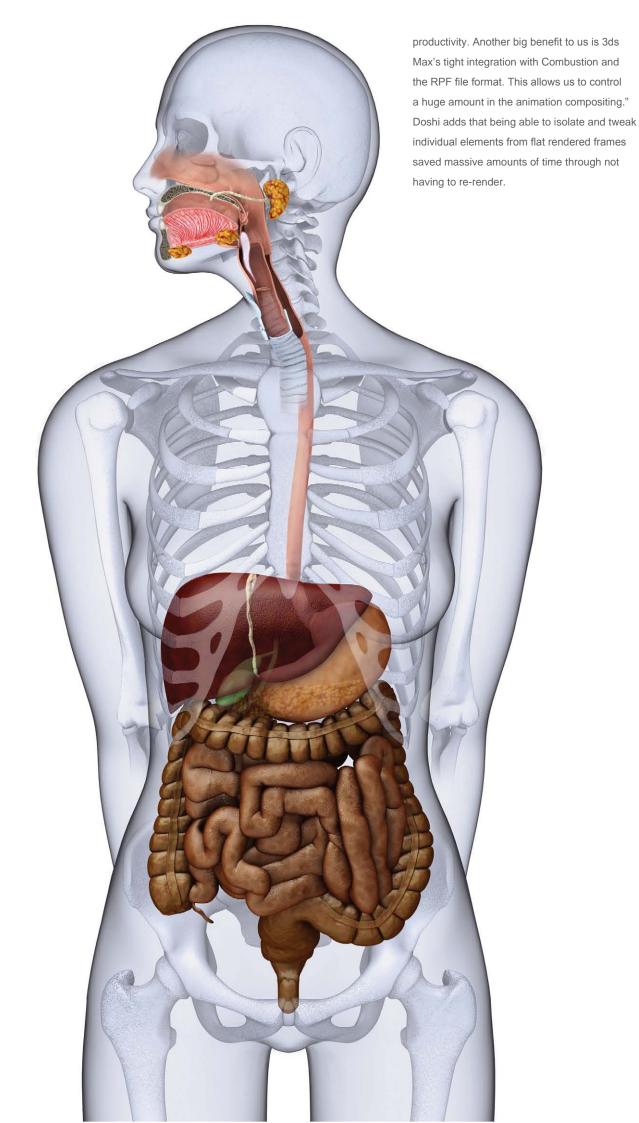


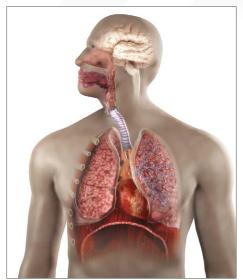




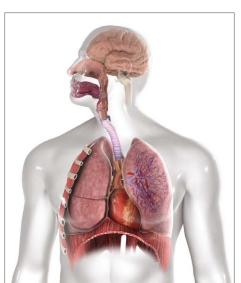


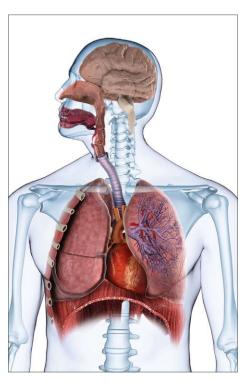


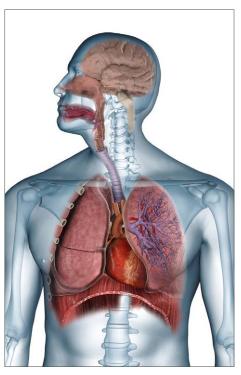


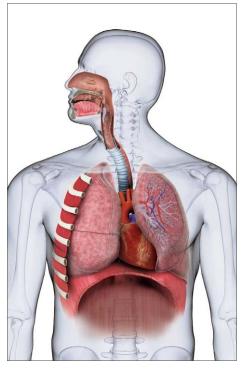


The 3D information in the files meant that the team could add effects like depth of field, motion blur and decreasing distance saturation. Composited shots had up to 12 passes, which Doshi says Combustion handled with ease — "so much of the final look for each animation was a direct result of the work done in Combustion that it's really inseparable to the 3D work in our pipeline."











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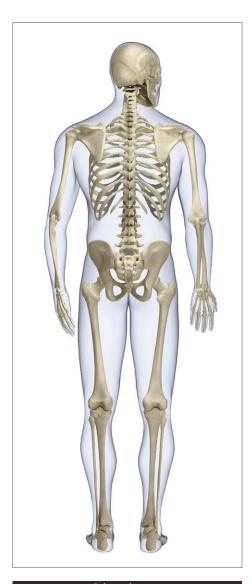
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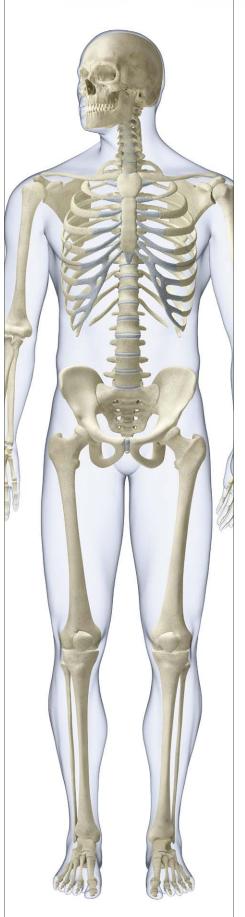


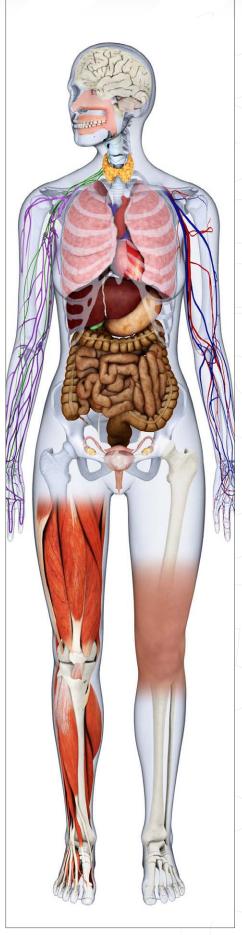
So was the client happy? Absolutely. Art
Director of Publisher Dorling Kindersley says
the work Medi-Mation has done has "the perfect
combination of realism and graphic clarity we
required. This is truly 21st century anatomical
illustration, bringing alive anatomy and
physiological processes for the home reader
and healthcare professional alike. And then they
blew us away with the stand-alone animation
sequences for the accompanying DVD."

HUMAN BODY 3D

Article courtesy of: Raj Dehil on behalf of Autodesk and Medi-Mation.







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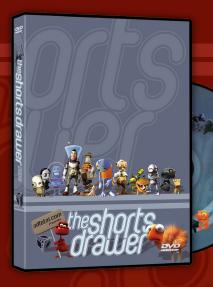
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Introduction:

A Collection of the finest independent animated movies and commercial trailers. The DVD includes work from a whole number or different sources, such as students, independents animators and commercial studios. We want people to be able to view this wealth of elite animation in one convenient high resolution package whilst generating much exposure for these talented artists at the same time.



the shorts 2004 Oraquer

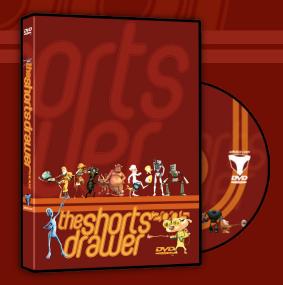
- Running Time: 3hrs 8 mins
- 27 Shorts movies
- 6 Clips & Trailers
- Region Free, NTSC & PAL versions
- Shorts & trailers from artist and studio like:
 Blur Studios
 Brian Taylor
 Marco Spitoni

Patrick Beaulieu & Alex Mateo



the shorts with the short with

- Running Time: 3hrs 8 mins
- 27 Shorts movies
- 3 Trailiers
- Region Free, NTSC & PAL versions
- Shorts & trailers from studios such as: Blur Studios Keytoon Animations Studios Redrover Studios
 - & Platige Image
- Loads of extra including images and storyboards







Is ART A GIFT...? 3dcreative

A GIFT...?

After such a positive reaction to our 'Advice for Aspiring Artists' feature in the January 2007 issue of 3DCreative magazine, we decided to make it into a recurring feature.

One question that the 3DCreative team has pondered, is whether art is a gift that we inherit from our parents, or is it something that can be encouraged simply by our surroundings, lifestyle, or just sheer perseverance... So, this month we decided to put this question to a number of different 3D artists across the globe, and here's what they had to say on the subject...

ADRIAN TIBA

System Engineer, SC Infologic, Oradea, Romania

"Yeah, it can be gift, too. It's not in my case - my parents weren't art oriented."

ALI ISMAIL

Digital Artist, Lucasfilm Animation, Singapore

"It's a mix of both genes and surroundings, the same as everything else in ones personality. Some people make the mistake of thinking it's just a gift, where you don't need to work hard to understand even the basic skills. Every good





artist, in what ever medium, has to work hard to get where they are."

ANDERS LEJCZAK

Project Manager, Framfab, Malmoe, Sweden

"I think it is a skill that you are born with (or without) which either develops or not, depending on the specific surroundings."

André Holzmeister

3D Artist, TV Globo, Brazil

"I think both answers are true. I have the gift; I always was the best at drawing in school. I've drawn since I was a little kid, and yet I can see other gifted artists today, especially painters that

3dcreative Is Art a Gift...?

never even studied art, and they are all great artists! I believe that this is only the starting point; you have to study and search references all your life to become a great artist..."

ANDRE KUTSCHERAUER

3D Designer, Studio Messslinger Gmbh,

Munich, Germany

"Everybody can learn the technical aspects, but my ability to imagine pictures is inherited from my parents, I think."

Anna Celarek

Student, Vienna

"I think that it has to do with the character of a person, and there are a lot of factors which contribute to your character, like parents, the way you grow up, teachers you have, friends and so on. I think every person has a sense for art when he's born, but some people don't develop it."

CESAR ALEJANDRO MONTERO OROZCO

CG Artist & Freelancer, Digi-Guys, UK / Mexico

"I think that anything can be learned. There are people that seem to learn faster, and work faster. However, nothing beats the perseverance of a determined person. To be the best, you need to have an open mind and



be able to critique yourself, and hear critique from others. Anything else is an aid, but not a necessity to become an artist. This applies for any other profession."

image by Cesar Alejandro Montero Orozco

Dana Dorian

Director, Axis Animation, Glasgow

With hard work and determination anyone can learn to be an artist. Some people just find it easier than others."





DANIEL VIJOI

"I think it could be a gift, but definitely not one that is inherited from our parents, as such - it is encouraged by everything that stands beautifully around us, since we are the "small walking characters" in this world (for me at least). Art can also be achieved by perseverance, by one who lives in this environment, surrounded by artistic parents, friends or co-workers. I have a saying: "Life is surrounded by art. Enjoy your art.""

DAVID REVOY

Illustrator / Concept Artist, France

"I think art is all of these things; like a second skin that is as complex as a personality can be."

ERIC PROVAN

3D Modeller, Sony Pictures Imageworks, LA, USA

"I come from a very creative family, so It would be easy for me to say that Art is inherited from one's parents. Unfortunately, my parents also taught me that with enough dedication and motivation, you can do anything. So, who am I to say, really? Maybe Art is a gift inherited through perseverance?"

EUGENIO GARCIA

3D Illustrator & Animator, GrupoW, Saltillo, Mexico

"In my case, my parents don't do anything artrelated. When I began to draw I was just 4, and I was inspired because an old neighbour of mine was an artist. Through with my own perseverance and practice I have improved greatly."

GUSTAVO GROPPO

General 3D Artist, Mamute Mídia, São Paulo, Brazil

"To me, many people are gifted with talents which are revealed in some moments of life, however this revelation does not occur just through a gift, but because they have the capacity to comprehend things that surround them and have the perseverance to do what they do."



HASRAF DULULL

Visual Effects Artist, The Moving Picture Company, Soho, London

"It is something you have inside you that is so bursting to be exposed, and when you find the tools or means to allow this then you become the artist... In my case, it was the computer and software which were the tools which allowed me to expose my creative ideas on screen. Inspiration when compositing is usually all around you; things like light nuances, shadows, just the subtle things in your surroundings really help you be a better artist, or in my case a compositor."

JURE ZAGORICNIK

"It's a combination of all those things."

LIAM KEMP

"A little bit of each. An innate sensibility to art must be present in order to improve one's skills with ease, but perseverance is needed in order to be successful."

MATHIAS KOEHLER

Freelance 3D Artist & Industrial Design Student, Braunschweig, Germany

"I think it's all about perseverance. I also do not believe in talent. In my opinion, anyone can learn anything as long as he/she keeps practising."

MATT WESTRUP

"Definitely inherited."



Is ART A GIFT...? 3dcreative

MICHAEL SEIDL

3D Artist, Modelling & Rendering, Austria

"I think the right sense for art is a combination of many different factors. It can make your life much easier as an artist when you have talent, but as the different 3D packages get more and more complex, you have to be very perseverant to get the most out of them. I think that one of my biggest strengths is that I watch my surroundings very carefully. You can learn a lot from your real life environment and translate that knowledge to your 3D program, for example how a shader would work..."



Freelance 3D Artist, Bearfootfilms, Geneva, Switzerland

"The ability to be an artist can be gained by sheer hard work and dedication - as long as you have the foundations and you know the basics."

NICOLAS COLLINGS

Character Modeller, Larian Studio

"I think almost all kids are attracted by "art". I mean, most kids draw until at least the age of 10. Then I think the family can play a role if the parents are themselves interested by the field of art. Children obviously then have easier access to it. About the fact whether they would be better or not, for me the difference comes from the time you spend working at it - the more you practice, the better you will be. It's 10% gift and 90% work."

PEDRO MENDEZ

"Probably not from your parents, but for sure it's something from your DNA. Anyway, that doesn't mean that you cannot transform yourself in that way, which is where your surroundings, lifestyle and your perseverance jump in... We all need a good balance between these elements to define our style."

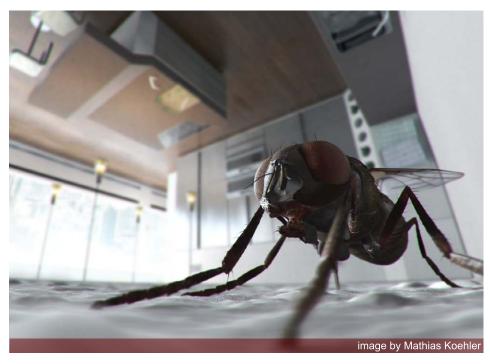
PETE SUSSI

Creative Director, Huntington, USA

"I could never have picked up a pencil until I was 25 and then have been incredible once I had







3dcreative Is Art a Gift...?

learned. But if I picked it up, does that mean I learned it, or was my mind always open to it but never tapped into it? I suppose I'd have to say they work together."

PETER SANITRA

3D Artist, ImagesFX, Prague

"In my case, part of it is a gift from my parents. The rest is how you feel your surroundings and how you react to them."

Petra Stefankova

"There are surely a few inherited predispositions, because not everybody in the world really wants to be an artist. But mainly, creativity is a way of thinking. You should learn how to open closed



areas of your brain and use them properly. And second, it's a consistent craft practice. Although some fine artists of today represent a group of so-called ideas communicators, who prefer strong ideas without any effort to learn the craft to the nicely looking and technically precise forms. It's about their philosophy and lifestyle. So this is also a possible way to express yourself, just learn from both approaches and choose your path."

RICH DIAMANT

Lead Character Artist, Naughty Dog

"I think that artistic talent is something that you are born with. I don't think however that your parents have to be artistic for you to acquire those talents. I also believe that it can be encouraged by your surroundings and lifestyle, as well. Most of what makes a great artist is their will to be great. I think if you have the sheer passion and drive you can become an artist. What makes certain people stand out however could just be something they are born with, who knows. I know some artists have to work a lot harder than others to reach the same level. We can't all be that lucky!"

Sean Dunderdale

3D Artist, Saddington & Baynes, London

"I think it is like any talent that some have and some don't, however the talent alone is rarely enough and a lot of hard work is needed to take advantage of it."

SORIN RADU

"Talent is something that you inherit; something that you must exploit to its maximum, and for this you need ambition, perseverance and the right life style."



Is Art a Gift...? 3dcreative

STEPAN (O)NE GRAKOV

"I think it could be both, but in my case it was my interest that grew into a serious relationship through time and practice, because I like to have the opportunity to create things that can't be made in real life."

SVEN RABE

3D Artist, Germany

"I think a bit of everything, because art is something that comes from the heart. It's a part of your life and your personality which has been influenced by your parents, your surroundings, your lifestyle and many other things."

TIZIANO FIORITI

Freelance 3D Artist & Digital Matte Painter, Italy

"All people feel the need to be happy. It is an endless and continuous need. However, unanswered questions often turn in our mind which remain unfinished and are source of frustration, as well. But all is not lost. Men can make use of special tools to get relief and to fulfil their wishes and aims. Actually, they are the keys to happiness. Trying with all your heart is the secret. Art is the expression of human feelings; it is a gut and universal instinct. All of us have got it but sometimes we are not able to put it to good use. Actually, many people are real artists inside, especially when they work with passion and enthusiasm."



TYCANE

"I think a lot can be achieved through sheer perseverance. You can go a long way just by knowing the software that you use well. But I also think that to be become a great artist, genes and surroundings have something to do with it. I myself come from a very creative family (not saying I'm a great artist, mind you); several of my family members work professionally in their respective fields (painting, fashion) and do very well. They all have natural ability for creative arts. But of course, since my whole

family is creative you could also say that it has something to do with the encouragement you get from your surroundings."

VOJISLAV MILANOVIC

General 3D Artist, Animated Biomedical Productions, Sydney, Australia

"A little bit of everything. Sometimes people are naturally talented, yet their talents diminish because the people around them do not, or cannot, understand them. It's hard work as well. Success is 5% talent and 95% hard work."

ZDENEK URBÁNEK

"This is a very interesting question, but few know the answer. In my opinion, it's all of those things; people who create good or the best art have a big talent which they inherit from parents, but their lifestyle must work around art, too. I think the biggest part of it is a gift from nature, or parents."

NEXT ISSUE:

Join us next month when we will ask artists the question:

WHAT TELLS YOU WHEN A PIECE OF WORK IS COMPLETE?



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"John Knoll Didn't really have the time to enjoy his 2007 Oscar Prize, since he started work on the last episode of this trilogy, finishing it in record timing, without falling back through technical compromises."

PIRATES CARIBBEAN AT WORLD'S END

TO COLO

The final movie of this Gore Verbinski trilogy, based on the Disneyland theme park attraction...

PIRATES OF THE CARIBBEAN AT WORLD'S END

It's hard days for pirates: their time is about to fade out. Lord Cutler Beckett (Tom Hollander) from the British East India Company manages to take control of the infamous ghost ship, known as the "Flying Dutchman", and its evil and vindictive captain, Davy Jones (Bill Nighy). The Flying Dutchman, led by the admiral Norrington (Jack Davenport), scares and destroys anything on the Seven Seas revealing its unstoppable evil power. Will Turner (Orlando Bloom), Elizabeth Swann (Keira Knightley) and Captain Barbossa (Geoffrey Rush) sail with the feeble hope of joining the Nine Lord Pirates of the Brotherhood - the only way to defeat Cutler Beckett, the Flying Dutchman, and the entire Company fleet. However, one of the Lord Pirates disappeared: Captain Jack Sparrow (Johnny Depp); the best and worst pirate; trapped in Davy Jones' casket after his frightening encounter with the monstrous Kraken at the end of the second movie. In a weird alliance which grows more are more uncertain each day, the brave crew (which includes Tia Dalma (Naomie Harris), Pintel (Lee Arenberg) and Ragetti (Mackenzie Crook)) have to reach the exotic Singapore, sailing dangerous waters in order to face the Chinese pirate Captain Sao Feng (Chow Yun-Fat) to get a ship to be able to take them to the end of the world and save poor Jack... Even after succeeding in this hard journey, the gathering of the famous Brotherhood Council is still not enough to stop the terrorising empire generated by Beckett, Davy Jones and their powerful war fleet. That is, not unless Calypso - a sea goddess trapped in a human body - is set free and convinced to help them. And that's basically what Pirates of the Caribbean: At World's End is all about: the final movie of this Gore Verbinski trilogy...



PIRATES OF THE CARIBBEAN: AT WORLDS END







Pirates of the Caribbean is based on the Disneyland theme park attraction. The trilogy began with "Pirates of the Caribbean: Curse of the Black Pearl", followed by "Pirates of the Caribbean: Dead Man's Chest", which won an Oscar in 2007 for Best Visual Effects (Industrial Light & Magic) and was supervised by author John Knoll, along with his brother, of the first version of the popular software Adobe Photoshop. For the movie's climax - the maelstrom sequence where the pirates and the East India Company engage in an apocalyptic battle in a huge storm - the team had to find a structure to build exact replicas for the Black Pearl and the Flying Dutchman ships from the top, as well as other elements of the set. The only good place around Los Angeles was Building 703 in Site 9 where a big hangar of 180 x 90 x 20 metres in size, situated in the deserted Palmdale in California about 90 kilometres from Burbank's Walt Disney Studios, was built by Rockwell International in 1983 with the purpose of assembling 100 strategic bomber B-1 Lancers for the US Air Force. In the last years however, it has also been used as a stage for many other movies, such as The Terminal (by Steven Spielberg). On the inside of Site 9, Rick Heinrichs (Tim Burton's





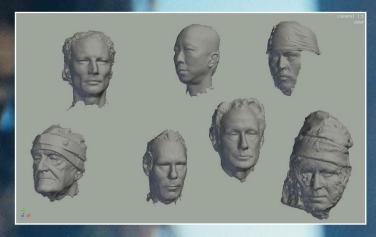
Sleepy Hollow) worked closely with another Oscar winner, Special Effects Supervisor John Frazier (Spiderman 2), in order to build the Black Pearl and Flying Duthman partial copies, including hydraulic systems for realistic movement, surrounded by huge blue-screens. To light up such a large background, Director of Photography Dariusz Wolski, and the electrical master Raphael Sanchez, used complex systems formed by 1400 lights, 40 lamps around the blue-screen (18 metres in height), 8 vans generating 10,000 Amps, and 95 metre cables.

John Frazier and his team also developed a tube and rain-release labyrinth system on the hangar's ceiling to provide 25,000 gallon waterfalls on the ships, actors and stunt-men. This system was also provided with



big fans which were able to create up to 160 kilometre winds. Visual FX Supervisors John Knoll and Charles Gibson (who was already the External Studio Coordinator for CIS Hollywood, Digital Domain, The Orphanage, Asylum VFX, Evil Eye Pictures, Method Studios, and Luma Pictures) from Industrial Light & Magic, and Animation Supervisor Hal Hickel, took over 2,000 poses for Pirates of the Caribbean: At World's End. 752 were taken just by ILM, thanks to the efforts made by 200 artists, including those of the pirate Davy Jones (Bill Nighy) and his tentacle beard (seen in the previous movie). For this sequel, Knoll and ILM developed a new motion-capture system called iMocap, simplifying all the procedures needed to use this technology. Instead of using sixteen cameras, Knoll and his technicians built this totally portable hardware,











since just three cameras and Lycra suits (with sensors and grey/black chequered bands) for the actors were needed, without having to use a big blue-screen equipped stage and indispensable things for the motion-capture (Mo-Cap). Actually, the sixteen main characters from the Flying Dutchman's crew, created for the previous movie, were increased by ten for this sequel, in particular for the maelstrom sequence where the original number wasn't enough to populate both ships during the final battle. ILM used Autodesk Maya, Zeno and Pixologic ZBrush for both the modelling and the animation on the Flying Dutchman's pirates. Another



new feature in Pirates of the Caribbean: At World's End was when, in Captain Jack Sparrow's dream, he became part of the ghost ship. This was achieved by taking pictures of Johnny Depp in a costume equipped with grey bands in order to capture his actions, and the animators then had the job of re-creating all the facial expressions, frame by frame. The digital model, based on Johnny Depp's body, was built keeping in mind that parts of it were going to be attached to the ship's wooden walls, and the internal body sections had to be completed with corals, rocks and rust, including part of the brain, and they had to make it as realistic as

possible with a skin simulator. Another addition to this movie were the crabs which were able to lift Jack Sparrow's galleon and take it around the desert, and those which came out of Calypso once she was set free from her human body. For the rendering, ILM's artists built a main model, called the "Hero Model", which was used for detailed frames and close-ups, different versions for the animated elements behind the more defined crabs, and for when using particle systems for the group in motion. The Director, Gore Verbinski, who firmly believes in the highest interaction between live-action filming and CGI generated images, decided to have

3dcreative

PIRATES OF THE CARIBBEAN: AT WORLDS END

the actors run over by thousands of blue spheres when Calypso grew tremendously bug and exploded. This experience was probably the most unusual for the cast: 175,000 balls falling from Palmdale's Site 9 ceiling onto Black Pearl. Those simple blue balls then became thousands of fast crabs, after John Knoll and ILM swapped them with their animated replacements. Once the cast finished filming all the sequences of the battles between the Black Pearl and the Flying Dutchman, ILM had to then extract the decks from the galleons and separate them from the blue-screen in order to insert the CGI pirates in the compositing stage, through iMocap, along with the rest of the characters and environments. For the rendering of the whirlpool, ILM used an advanced fluid-dynamic simulator called "PhysBam", developed along with Stanford University, which had already been used in Poseidon and the previous Pirates of the Caribbean films. PhysBam uses a Voxel technology - volumetric elements - for the best water results and for the spiralling water movement, whilst 3K resolution RenderMan was used for the bubbles, fog and foam. Released just a few months after the previous two episodes, Pirates of the Caribbean: At World's End has become a visual and digital effects masterpiece. John Knoll didn't really have the time to enjoy his 2007 Oscar Prize, since he started work on the last episode of this trilogy, finishing it in record timing, without falling back through technical compromises. Pirates of the Caribbean: At World's End has also proven to be superior to its prequel.

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Pirates of the Caribbean: At World's End

Article courtesy of: IMAGO EDIZIONI, ITALY www.imagonet.it

Original Italian by Pierfilippo Siena English Translation by Simoe Parmegianni

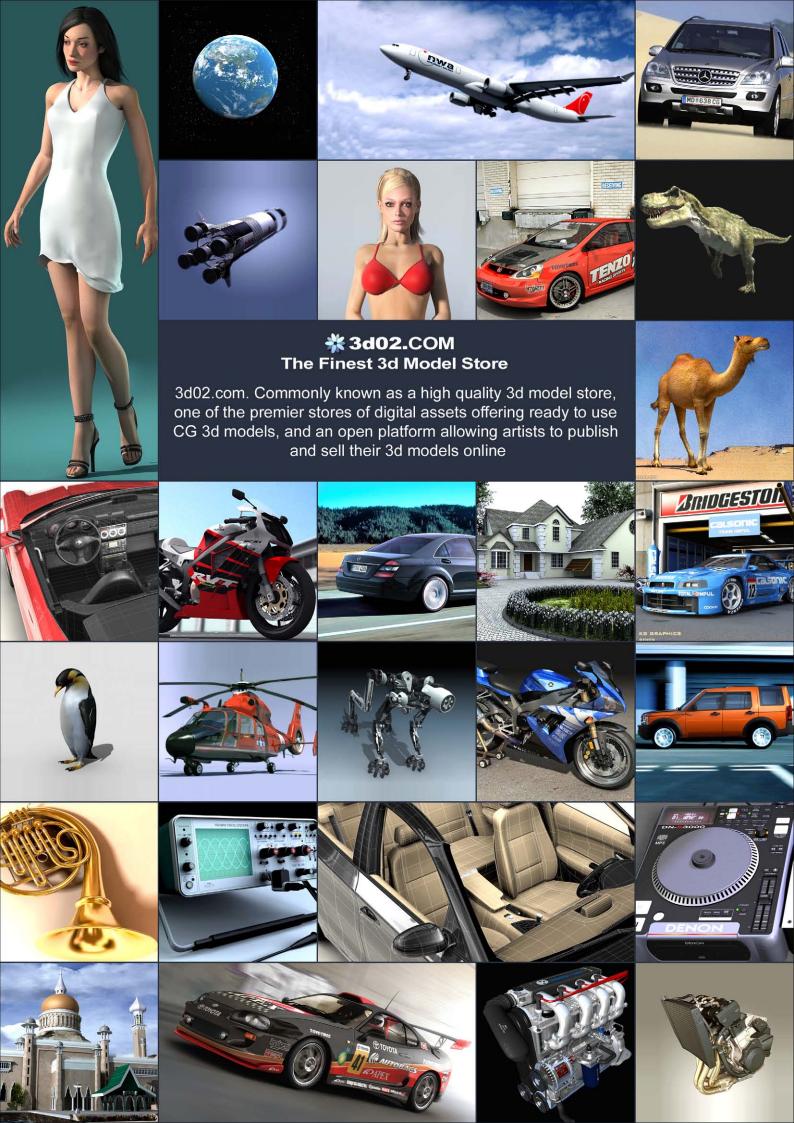




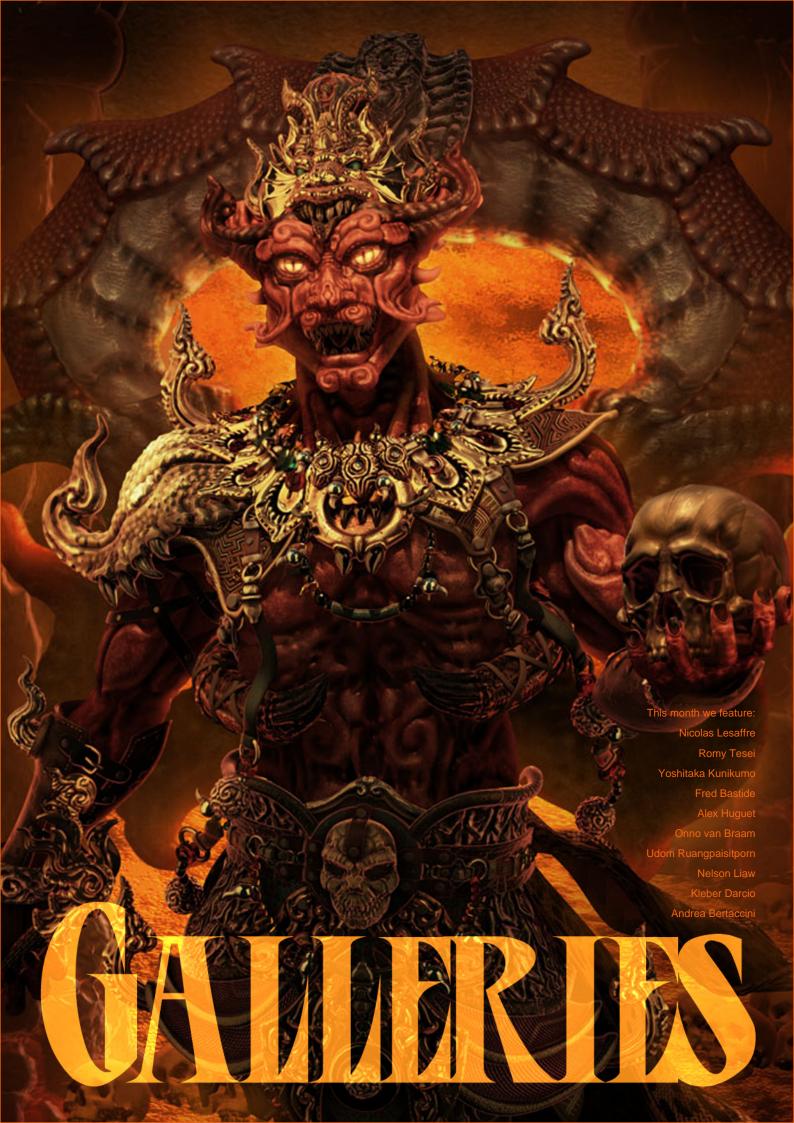


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Zoo Publishing presents the new issue of **2 dartist** magazine a downloadable monthly magazine for concept art, digital & matte painting for only ϕ_4 us ZOOPUBLISHING lssue 018 June 2007 \$4/€3.25/£2.25 Concept Art, Digital & Matte Painting Magazine Custom Brush Free Digital Custom Brushes Included with out Custom Brush & Speed Painting Tutorials! **Articles** The Sketchbook of DPI Studios' Embrio and Jaysin **7n***lervieut***ó** Beet, Cole Eastburn & Andy Park Dominus Elf, Philip Straub, Thomas Pringle & More!! **Making Of's** Taishu', Summon Infinity & 'Lava Swimmer' Tulorials
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DRUM

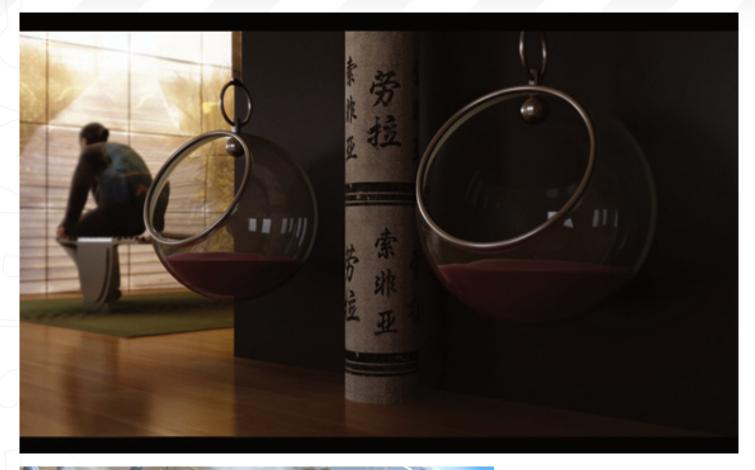
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You can follow an in-depth interview with this artist in a future issue of 3DCreative



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BOX HOUSE

Nelson Liaw

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SynthEyes 2007 1/2 3-D Camera Tracking Software

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SynthEyes now includes an awesome image stabilizing system, based on SynthEyes's famously fast and accurate tracking. Integrating auto-tracking and stabilization makes for a terrifically fast workflow, and means we can do all the sophisticated things to produce the highest-quality images possible. We added the flexibility to nail shots in place, but also to stabilize traveling shots. Then, piled on a full set of controls so you can **direct** the stabilization: to change shot framing, add life, or minimize the impact of big bumps in the footage. Since you've got other things to do, we multi-threaded it for outstanding performance on modern multi-core processors.

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the 3DCreative Magazine introduces the 'Challenge' Section of the mag. Every month we run the Challenges, available for anyone to enter, for prizes and goodies from the www.3dtotal.com shop, and also to be featured in this very magazine! The 3D Challenge runs in the Threedy forums and the 2D challenge in the ConceptArt forums, links to which can be found inside! Here we will display the winners from the previous month's chalenges... Stylised Animal Challenge CONCEPTAR 7 In Association with

Stylised Animal Challenge Snail

THE CHALLENGE

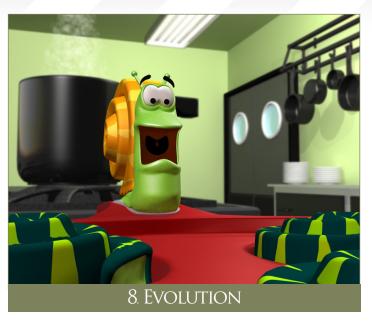
Welcome to the Stylised Animal Monthly Challenge. Each month we select an animal and post some images in the Forum Thread as reference. All you have to do is create a 3D render of this creature in a stylised/abstract/ cartoon style whilst keeping your creature instantly recognisable. We wanted to publish some content in 3DCreative Magazine on how to create stylised animals, such as you see in the many feature films and cartoon galleries. We thought that this regular competition might just bring in the images/making ofs we need, whilst giving away great prizes and exposure in return. If it continues in success, we will try to boost up the prizes as much as possible! This month's Animal was the 'Snail'. You can see the top entries, as voted for by the public, and also the project overviews from the first, second and third placed entries here...

WHAT ARE WE LOOKING FOR?

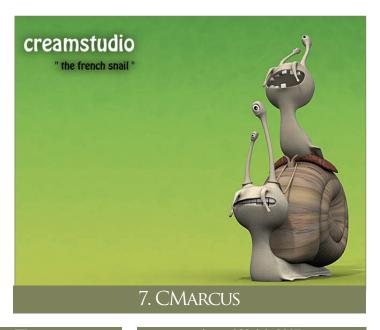
Funny and humorous entries which break the animal down to its most recognisable components; emphasise these in whichever ways you think best and render your stylised/abstract/cartoon masterpiece. The rules are pretty laid back; please submit 1 x 3D render, minor post work is OK, and it's up to you if you want to have a background and include some graphical elements or text on your image. Renders of the 800 pixel dimension sound about right, but the top ten will be featured in 3DCreative Magazine, so if you can create some higher resolution images too - all the better! There will be one competition per month, with the deadline being the end of the month, GMT. For a valid entry, simply make sure your final image is posted in the main competition thread before the deadline. We require the top three winners to submit 'making of' overview articles that will be shown on either 3DTotal or 3DCreative Magazine; these need to show the stages of your creation, different elements and some brief explanation text of why, and how, you did what you did. We will format this into some nice looking pages to give you some great exposure and us some quality content. Each competition will have one main thread that starts with the brief at the top. This is where all entrants post all WIPs, give feedback, and generally laugh at the crazy ideas that are emerging each month!

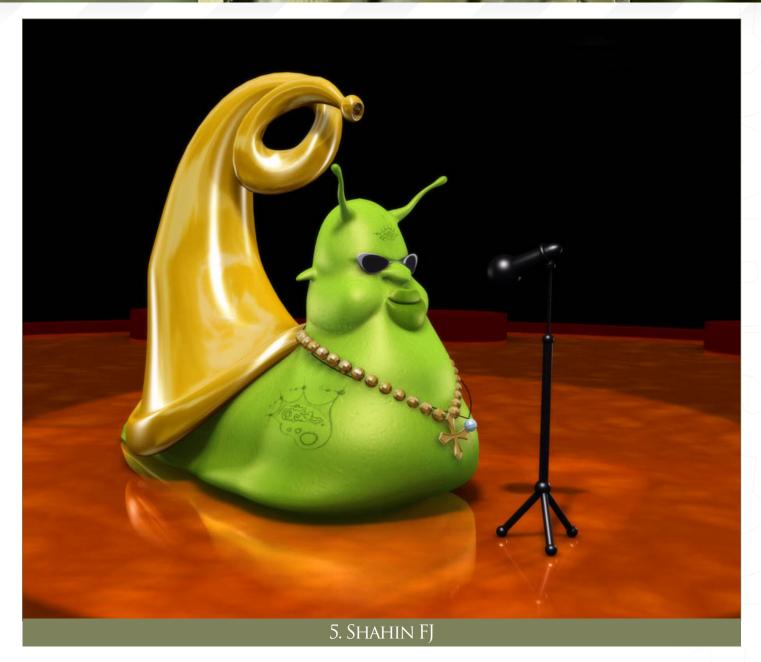
PRIZES

1st Place: Any 3 items from the 3DTotal Shop. 2nd Place: Any 2 items from the 3DTotal Shop. 3rd Place: Any 1 item from the 3DTotal Shop.





















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In Association with





CHALLENGE THREAD

The entire SNAIL competition can be viewed HERE.

The current challenge at the voting stage is: MONKEY

The current challenge taking place is: AYE-AYE

To join the next challenge, or to view previous and/or current entries, please visit:

www.threedy.com

Or, for the 2D Challenge, please visit:

www.conceptart.org

Or contact: ben@zoopublishing.com

LAST MONTH'S CHALLENGE WINNERS:

- 1. Arthur Sacek
- 2. WeitA Studio
- 3. Janis Ancitis

Read on for the Making Ofs their winning entries...



Anteater Challenge Making Ofs

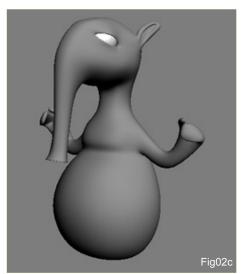
Here are the Making Ofs from last month's top three winning entries...

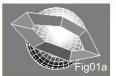


First of all I had to look through all the given reference images due to the fact that I've never seen a real anteater before. The idea of a lazy guy using a vacuum cleaner to get the ants from an ant hill was the very first that came to my mind, and I just had to make it in 3D. I'm not that good at drawing so I just made some quick sketches and started modelling...

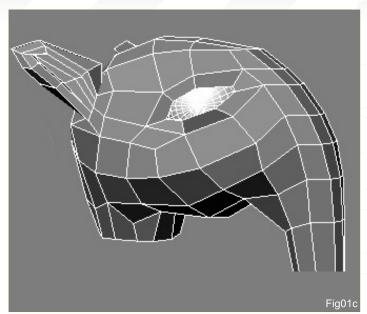
MODELLING

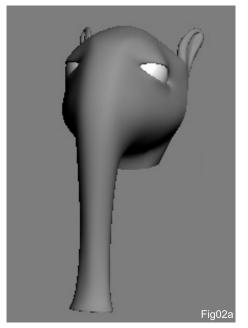
The modelling process was very simple. I started with a solid plane and used Shift to extrude new faces from edges. At first, I made the eye area, and the head and body were then done in a couple of moments (Fig01a - 01c and Fig02a - 02f).

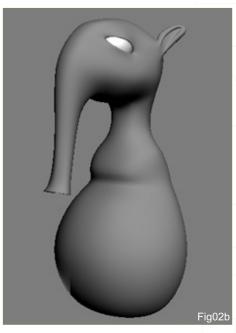




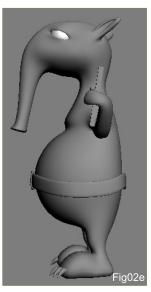


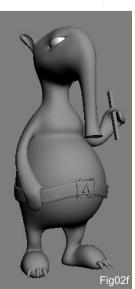










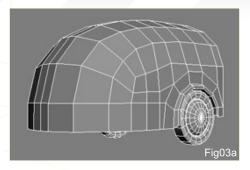


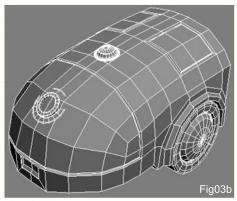
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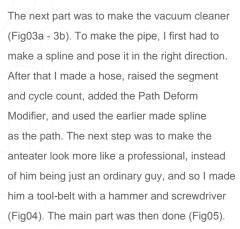
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SNAIL Stylised Animal Challenge





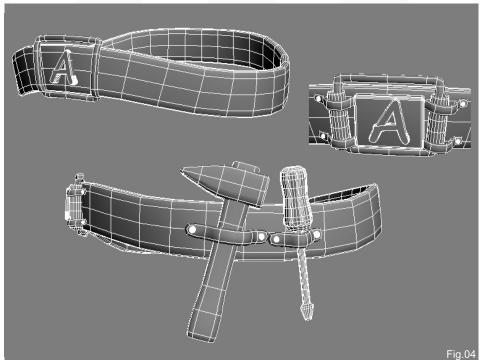


LIGHTING

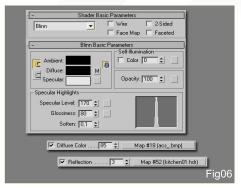
The lighting in this scene was also very simple. I just used one Omni light, one Skylight, and as this scene was rendered with the default Scanline renderer I also had to use the Light Tracer to get the right shadows.

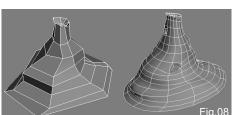
MATERIALS

For many of the elements in the scene I didn't lay out the UVWs because it was unnecessary this time. Most of the objects in the scene had the Oren-Nayar-Blinn Shader with a Falloff map as the Diffuse Color. The sky was just a Gradient Filter in the Environment Map Slot which was given some blueish colours. The eyes were a Blinn Shader with a high Specular









Level value and an HDR image was used to achieve the reflection (Fig06).

SCENE

To make my entry more interesting, and to be sure that others got the same feeling that I had about my idea, I modelled an ant hill (Fig07) and some other elements (Fig08). For the grass I used the Scatter Modifier (Fig.09). So at this point, the modelling process was mostly done (Fig10), I then just needed to make a few tweaks for the ground and scaling the object to get the right proportions.

FINAL

So, as said before, this was rendered with Scanline Renderer using the Catmull Rom Filter to get a better quality of the final picture. I then used Photoshop to add a Gaussian blur to the background (I used the Alpha Channel to make this easier) and sharpened the image a little bit, as well. And that was it for Photoshop!

Many thanks to eXeM and Binary for their help and advice with the making of this piece.

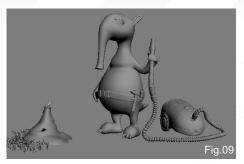
JANIS ANCITIS

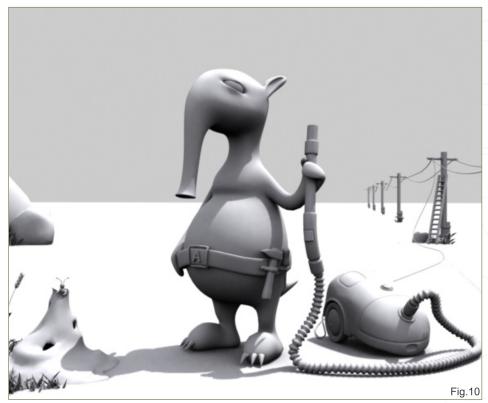
For more work by this artist http://rooky.777hp.com/

Or contact him at:

r00ky@inbox.lv









SNAIL Stylised Animal Challenge

2ND - LICK LICK

I'm not going to talk about the technical workflow of the modelling in this tutorial, but will instead try to explain how to achieve my 3D cartoon style scene...

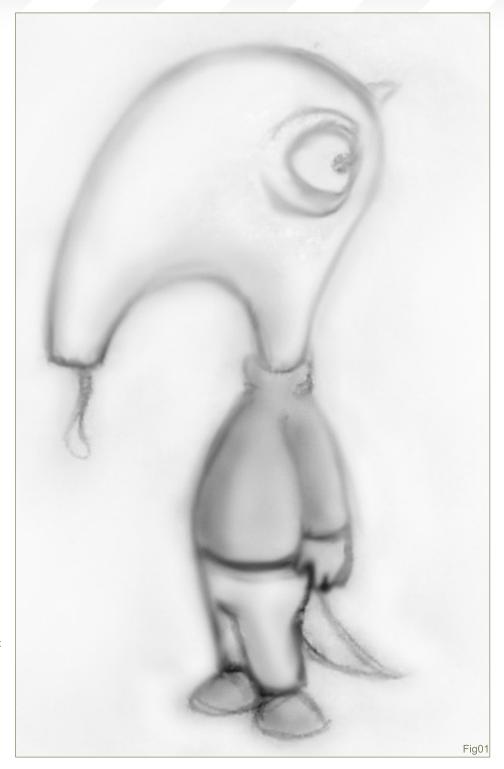
The technique I used to model was polygonal modelling, which I used because I believed it was the easiest way to achieve this cartoon style. When working with cartoon styles we usually need more tweaks, but don't require such a high level of detail (and so no high polygon counts). The most important thing when working with a cartoon is the style and character development, not the detail, but we still have to make it believable, of course.

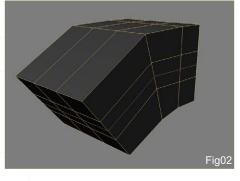
CONCEPT

I started out with a concept sketch (Fig01). My character's name is Lick Lick; he is a stupid and lazy, skinny anteater, and I decided to give him a shirt to wear (Fig01).

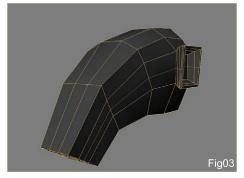
MODELLING

When I felt good about my concept I then started the modelling step. I started with very basic shapes and used the move and rotate tools to deform the vertices (Fig02). After a bit of move and rotate, I added some details and added the eye area to make the eye socket using the extrude and bevel tools (Fig03). I moved and rotated some vertices to get the right shape for the eye socket and the head. I then extruded more polygons to make the back of the head and sculpted the head until I felt good about its shape (Fig04). I continued extruding to make the ear, and made more adjustments to

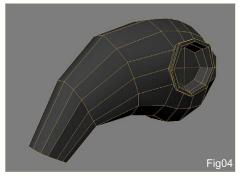




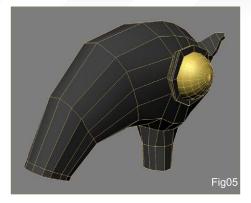


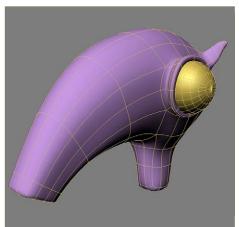


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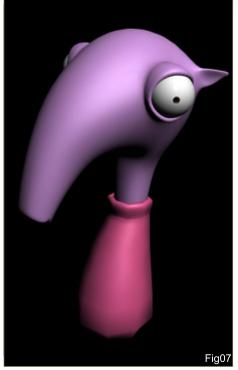
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make it look more the right ear for my anteater. A sphere was then added as a guide for the eyes when placed inside the eye socket (Fig05). Some smooth modifier was then added, and the end result can be seen in Fig06. So I add some detail on the ear, mouth, and eye socket (Fig07 & Fig08).

After the head and half of the body was done I decided to change the concept, because I didn't feel that it was an attractive style and because I wanted it to look cuter and a little more stupid. The most important thing was that it did not lose the anteater (animal) style, to keep it looking believable. I therefore decided to make it without a shirt (Fig09). To add cuteness I modelled him with a shorter body and short feet, making the head much bigger than his body. His eyes were still thrown out to achieve that slightly dumb look (Fig10). More adjustments were made to the eye socket to make it feel more stylised, and I then made the pupil of the eye even bigger, to add cuter touch. More detail was then added to his hands, feet and tail (Fig11). The render result can be seen in Fig12 - Fig13.





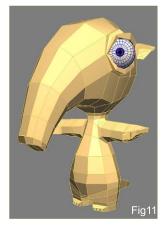
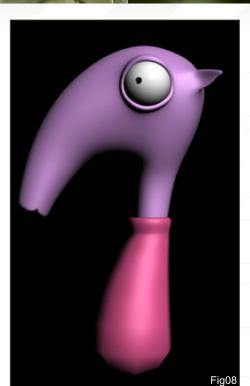






Fig10





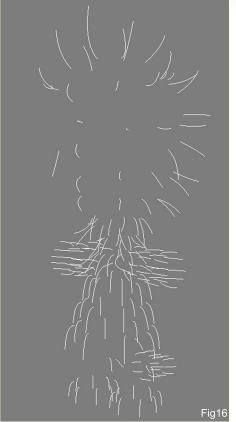
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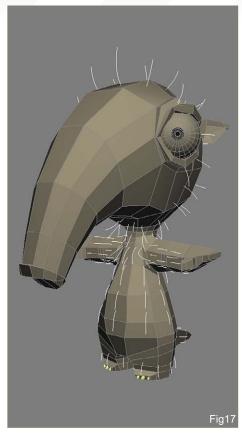
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SNAIL Stylised Animal Challenge







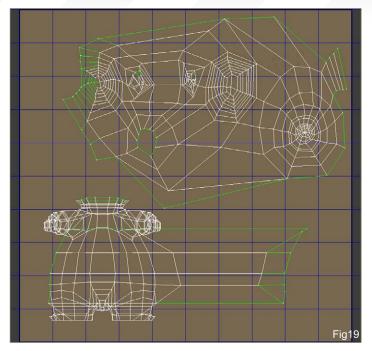


ADDING FUR/HAIR

After I felt satisfied with the model, it was then time to add some fur. Here I used the standard hair/fur modifiers that come with 3DS Max 9 (Fig14 - 15) to make the fur/hair look as though it had grown unpredictably. I made a spline guide (Fig16 - 17) to comb and control the hair growth, which made the hair flow much more naturally. I also made a few adjustments in the fur/hair parameter, in the frizz, kink and multi strand parameters, to make the hair more stylised and natural looking. I didn't want to achieve a realistic anteater fur because it didn't seem interesting to me, and not quite stylised enough for my concept (Fig18).

The next step was applying the texture map, where I used Unwrap UVW Modifiers. For this









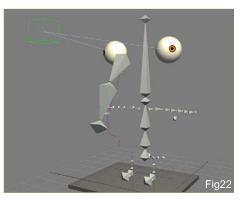
model I was just using simple texture mapping because his body was almost washed out by his hair/fur (and I had to save on time). So I simply adjusted the translucent parameter and translucent colour to get the feel of the subsurface scattering shader (Fig19 - 20). The final LickLick can be seen in Fig21. Note that I also made an expression morph target for him (Fig21).

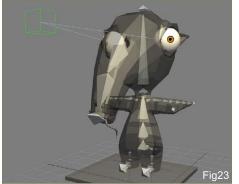
After the modelling part, I set the bone structure for LickLick. I chose to use the standard IK bones for him, rather than the biped system. The standard bones gave me more control over the bone design and adjustments. I also controlled his eyes for a more fun and easy look (Fig22 - 23).



The scene idea came to me after the modelling part was finished. The scene tells the story of somewhere like an old warehouse, where an alien ant has this obsession to become a soldier and is standing there pointing a gun at LickLick. The environment was set at night, with a warm colour scheme.

Modelling the stylised ant really wasn't a





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challenging task, because there are already a lot of cartoon stylise ants out there, like the ones in A Bug's Life for example. I decided that my alien ant should not look like any one of those, but because the competition deadline was drawing close, I had to keep my alien ant really simple and modelled him as quickly as possible. To save even more time, I didn't set any bones for the ant, I just simply adjusted the pivot point and selected and linked them together (Fig24 - 25).

Another thing to model was the military helmet. I used a lot of reference material to find the right design for this helmet, and came up with the model in Fig26.

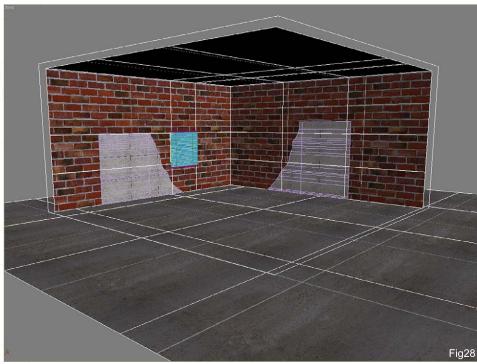
There was a lot of model for the scene, so I started modelling each required object one by one; some were modelled just to make the













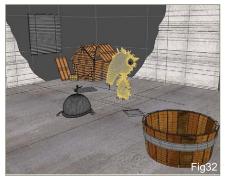
composition look right and to keep the picture balanced. I also used the polygonal modelling technique here (Fig27).

Next I set up the warehouse, which I made with a standard box with the pre-prepared segment count. I then added texture to it (Fig28 - 29).

For the pose of the characters I had to keep









their character shapes looking clear. For a good reference I rendered them as silhouettes first. If in silhouette you still cannot realise what your character is doing, then do not use that pose (Fig30). I then put it all together and designed the composition and stage. I had to make the anteater become the centre of interest, and so I used the principles of composition. However, I wouldn't like to say that my scene is perfectly composed, but I did try to make the most of the composition principles. I managed all of the objects in this way and organised it so that all of the stuff was pointing towards Lick Lick. Also, the background, you can see the wall with a grey area that crops the wall to focus your eyes on the centre of interest: LickLick (Fig31 - 32).

LIGHTING

For the lighting and rendering I managed to use the standard scanline renderer. The reason I did this was because I could achieve a more stylised lighting this way, and it also reduced the rendering time. The main reason though was that it was simply more fun playing around with the lights! I set up a set of lights which acted for the Key light, Fill light, Back light, Ambient, and Indirect light simulation. Fig33 shows the

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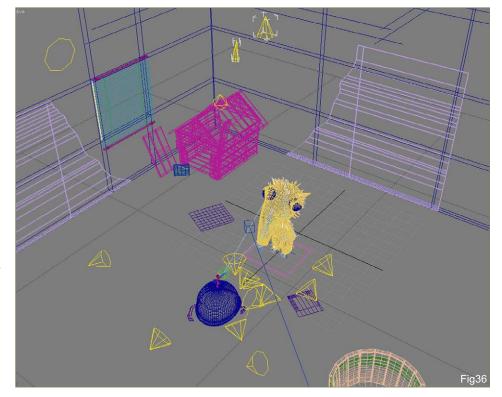




render before the lighting was setup - only one light was used in this scene. We can see that the shadow was too dark in this image, and the background lightness was competing with the foreground, and there were no Key lights, no Fill lights, etc. (Fig33). I therefore added a Key light, Fill light, Back light, moon light (second Key light), and Ambient. The result, as you can see in Fig34, was too dark and the colour was very monotone, which made the scene very boring. I decided that I had to add a coloured lighting design, a centre of interest (with lighting design), and I had to set the mood with some effects in the scene. I set the intensity parameter of all lights and the result was much better, but the background and shadowed area was still too dark, and there was still no mood present (Fig35). I adjusted the light's intensity again to achieve the most realistic lighting as possible, adjusted the colour of the light (to set the right mood), increased the intensity of the Fill light, add added a fog effect to the Key light. The shadow was also adjusted and some light was added to stand in for the Indirect lighting. The final set of lighting used for the scene can be seen in Fig36. I then made the final render.

WEITA STUDIO

For more work by this artist please visit: www.weitastudio.com
Or contact him at: weitastudio@yahoo.com





1st - The Vegetarian Anteater

In this tutorial I will show the developmental stages of my vegetarian Anteater. My main goal with this piece was to evaluate the time of execution of the image, trying not to lose time through processes that would not influence the final result. I used XSI and Photoshop for this piece.

CONCEPT

With my goal in mind I made some rough sketches, all the while thinking about how the modelling for my sketches would be if I took them to that stage. I didn't want to wander or try new solutions; it had to be practical and objective as I didn't have much time. I simply tried to imagine myself making the image for a client who had a limited amount of money and a real deadline.

When the goal was to create a stylised animal, it was interesting to also create a stylised situation. So, why not to swap the roles of my creations? I decided upon one anteater being bitten by many ants. Are anteaters ever bitten by ants? Well, my character for this piece had already turned vegetarian (Fig01).

MODELLING

The modelling stage is one of the easiest stages to spend a dangerously unnecessary amount of time on. We have to know what we really need to model, and the level of details that are required for the final image. It's important to analyse the final size of the image and the framing of each object. For example, the anteater had to occupy a great portion of the image, therefore it needed special care and attention, but the ants had to be quite small so they did not need as much detail.

ANTEATER

When I was analysing the references given in the forum, I realised that anteaters have a passive and cute image, and so I tried to





3dcreative

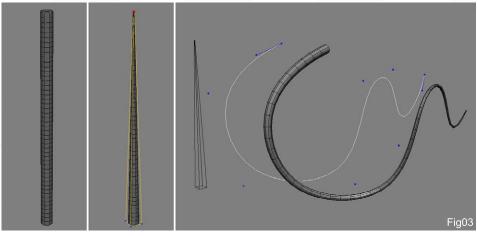
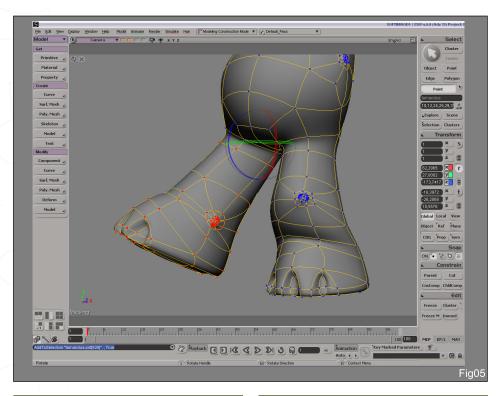
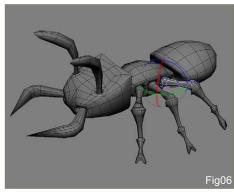


Fig04



reproduce these characteristics by modelling the anteater similar to a teddy bear. When modelling through box modelling, it's always interesting to know how the model will look like in the end with subdivision. For this process I used 3 models. One of them was the half of the body which I was working on, without subdivision. The other was a clone of the first one, but scaled by -1 on the X-axis. The third model was a combination of the two other parts. I isolated the model in one viewport and applied subdivision. This way I was able to visualise the final model in one viewport, and the working model in another (Fig02).

In the beginning, the position of the tongue was not defined, and so therefore modelling it could not be destructive. I used a cylinder with several edges in its length, to which I applied a lattice to sharpen the tip and a Curve Deform to place it in the desired position. This process gave me the ability of modifying the shape at any time (Fig03). The harmony between the parts was extremely important to bring life to the model. It was easy to simply place the nails at the end of the hands, but to give it a special touch it was more interesting for me to make the nails grow from the hands. For this, I used the same hand mesh to generate the nails and extracted the nail mesh from the body's mesh (Fig04). To place the anteater in its final position I used the simplest way, because I did not want to waste too much time making bones or setting the skin. For this, I selected the points to be modified, took the rotate tool (C) and modified the pivot temporally by pressing the Alt key (Fig05).

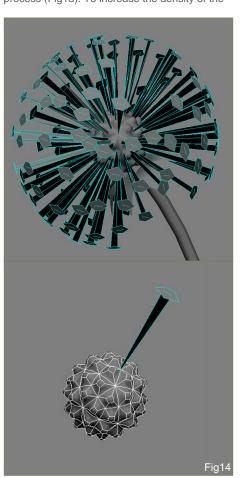


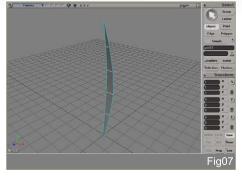
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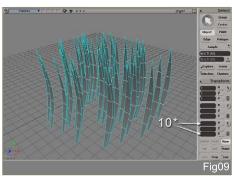
The ants were quite small in the scene, but there were lots of them! Because of this, I modelled them with enough detail so as not to need the use of subdivision (Fig06).

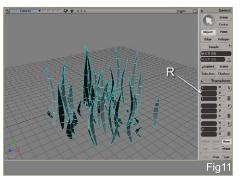
GRASS

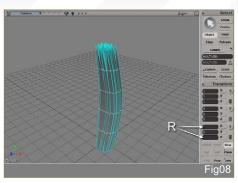
To place the Anteater in the environment and to enrich the scene, I decided to create ground vegetation. To develop the grass, I modelled a leaf with a very simple mesh (Fig07). I duplicated the model, selected all, and typed "R" into the X and Z position fields. This command generated a random value for each model (Fig08). To increase the variation between them I typed "10" into the same fields (Fig09). I executed this process for the Y rotation and scale (Fig10 - 11). The leaves that were not well formed were then deleted. I selected all of the remaining leaves and transformed them into a model (Fig12). This reference model was then duplicated and applied using the same random process (Fig13). To increase the density of the

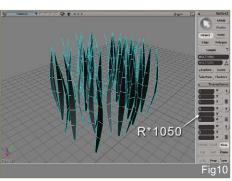


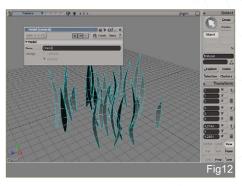


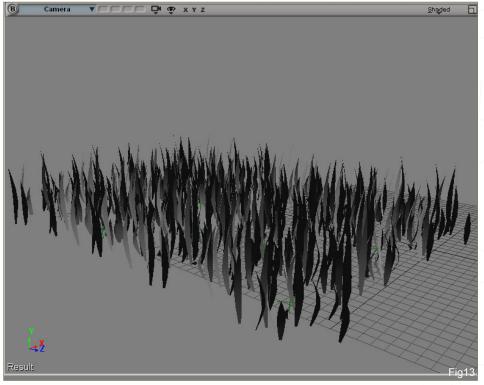












grass, all I would need to do was to add more leaves to the original model.

FLOWER

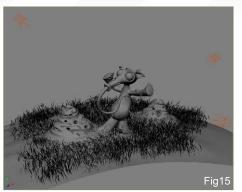
The flower was going to be small and blurred in the final image, and so it was therefore able to have a simplified mesh (Fig14).

LIGHTING

I used Final Gather from Mental Ray, which gave a very nice result with simple settings. To illuminate the scene I used 3 Spots; two for the whole scene and one just to give a back light to the anteater (Fig15).

PASSES

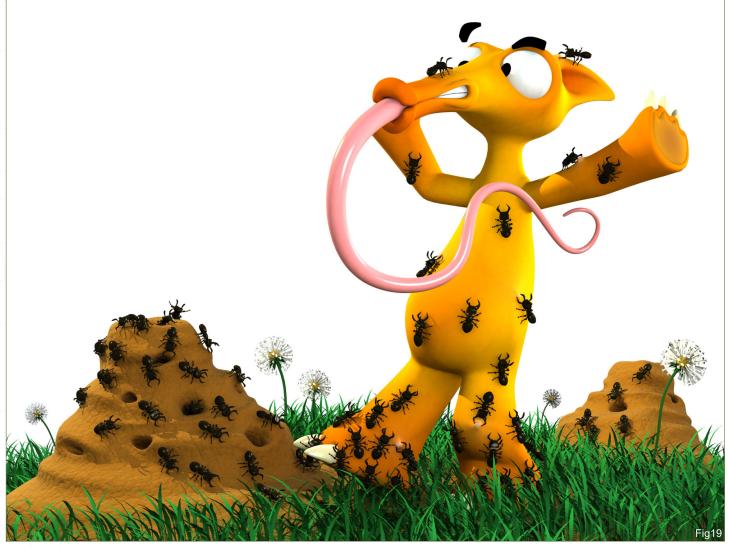
There were three passes to compose for the final image; the default pass with Final Gather, an Ambient Occlusion pass, and a Depth pass.

















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lighting



3D Environment Lighting is a

new 6 month tutorial series. Over the course of the next six months this series will be detailing techniques to lighting an environment under a number of different conditions. Each month will cover a step by step guide to setting up lights aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light and finally a submerged submarine light.



3DSMax Version

Page 13



Cinema4D Version

Page 11



Lightwave Version

Page ()9



Maya Version

Maya readers, as we are unable to bring to you the first part of the 3D Environment Lighting Tutorial in this issue. But don't worry, we will have it for you in the next issue of the 3DCreative Magazine



Softimage XSi Version

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This Month:

Natural exteriorlighting Sunny Afternoon

Learn Animation from the Best in the Business



Due to recent updates on LightWave 9.2, Chapter 5 will be released in Issue 24 of the 3DCreative Magazine. lightwave

WE THANK YOU FOR YOUR PATIENCE.



THIS PART WILL NOW BE FEATURED IN ISSUE 24 OF 3DCREATIVE MAGAZINE...

lightwave

COMPLETE GUIDE TO LIGHTING

PART 5: DAYLIGHT ADVANCED

In Chapter 4 we created a daylight setup using a backdrop and radiosity. Due to recent updates on Lightwave 9.2, Chapter 5 will now be released in issue 24 of the 3DCreative magazine. In the meantime, Cesar would like to share some free material with you. This includes the previous outdoor scene and model (click on the resource logo found in the scene to download the samples). Please feel free to use this for non-commercial purposes only. Cesar has also included some nice surfaces for you, which he has used in his work: black car paint, beige car paint, red car paint, rusty metal, darkened metal and wood (click the resource logo on the material image to download these samples). We apologise for the delay with Chapter 5 this month. Cesar's main intention is for you to learn only the very best techniques, and so we all hope that you will enjoy this free material that Cesar has supplied for you, and we thank you for your patience.

CESAR ALEJANDRO MONTERO OROZCO

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In this Making Of we are going to find out how Katrin modelled, textured and set up the Sea Turtle that you see here...

Sea Turble

Sea TUCTLE

CREATED IN:

Maya 8.0, 8.5 and ZBrush

After playing for some weeks with ZBrush, I wanted to do a small project. As I am personally not too interested in those aliens, dragons and monsters that you see done a lot, I decided on a sea turtle. To keep this short, I'm going to assume for this tutorial that the reader is already familiar with the basics of Mental Ray for Maya and ZBrush...

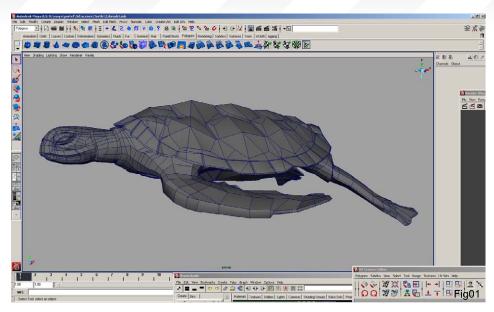
MODELLING

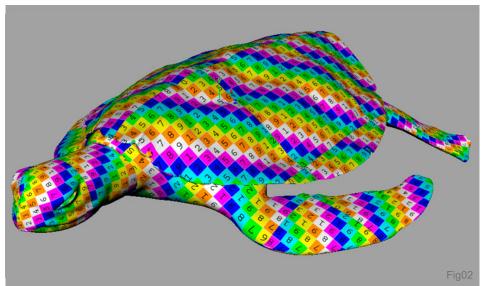
I made a low polygon model in Maya 8.0, and for rendering I used Maya 8.5. The head, body, feet and shell were kept as separate parts.

Because my PC had only 1 GB of RAM at the time, I imported them into ZBrush one by one. After initially trying to create the eyelid in ZBrush, I went back into Maya and modelled it there, too. The low polygon model can be seen in Fig01.

TEXTURING

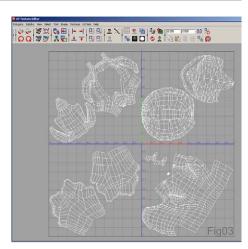
Painting deformations in ZBrush, I presume, is a lot of fun with a graphic tablet. I tried this with a mouse but just wasn't satisfied with my sculpting results, and so for the detailing I relied mostly on deformations which were limited by alpha masking, and used bump mapping for smaller details. For this approach, properly laid out UV coordinates are required. With this approach it makes sense to do the texture painting prior to the detailing in ZBrush. All colour texture maps were 2D painted in Photoshop on top of UV snapshots. I painted in 2K and 3K resolution and used plenty of reference images from the





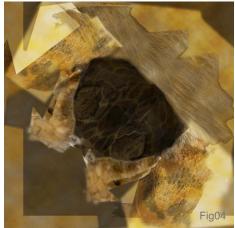
Internet and photographs that I took in a Beijing aquarium. The UV mapped model (1 level smoothed) can be seen in Fig02, and UV maps for all the body parts in Fig03.

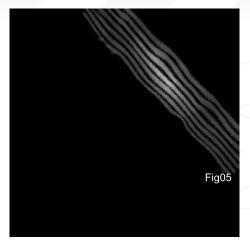
After finishing the colour maps, I painted, or extracted from the colour maps, greyscale deformations and bump maps for features like the wrinkles and bumps that I wanted to model in ZBrush. I used these maps to control the deformations in the ZBrush tool panel. When used as an alpha mask the black areas of the mask kept the model unaffected, so the deformations only changed certain parts of the model. For better control and a more irregular look I painted separate maps for different features, and layered the deformations on top of



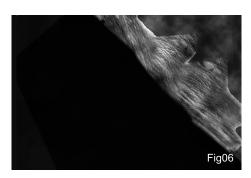
one another. Sometimes I even used different maps for the positive and negative deformation values. I imported the models into ZBrush and divided them six times. I then applied the alpha

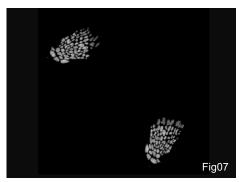
masking, and mainly positive and negative values for Offset, Inflate, Spheres and Taper deformations. For the small details and skin texture, a modified greyscale version of the colour map was added as a bump map on top of it. This way, the generated details matched the colour textures exactly. The head colour map can be seen in Fig04; some deformation alpha maps used for masking the neck in Fig05 - 06; deformation alpha maps used on the chin, and the bump map for head details (based on the colour texture map), in Fig07 - 08.



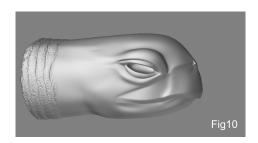


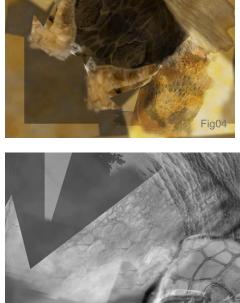
Alpha masking applied to the neck can be seen in Fig09; deformation applied to the non-masked

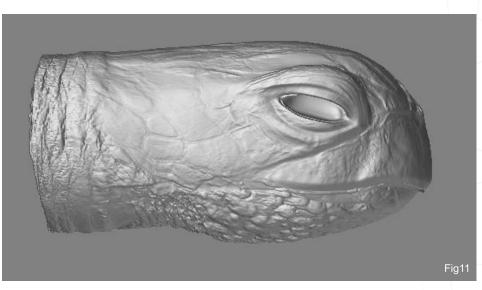












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Fig08

SEA TURTLE Making Of 3dcreative

parts (white mask parts) of the neck in Fig10; the result of several layered deformations on the head in Fig11; and the result of several layered deformations on the body in Fig12.

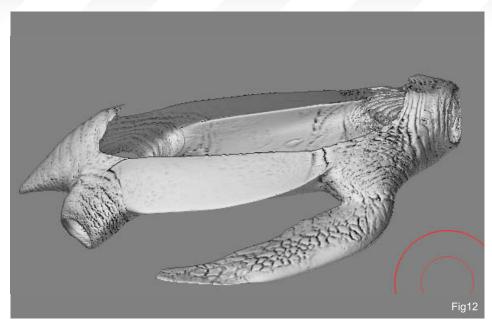
There was some trial and error involved. On the body I ended up using Resym because the right shoulder looked good but the left one was not so great. When I liked the result, I created cage models at level 1 or 2 and exported the models in .obj format. I then wrote out 2K normal and cavity maps from ZBrush using the ZMapper plug-in. The normal map and cavity map used for the head can be seen in Fig13 - 14.

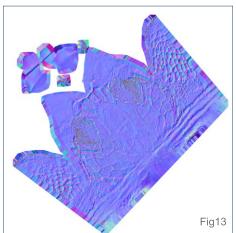
In the end, I think the advantage of the deformation map approach when compared to free-hand sculpting gives very accurate control of the placement of details, especially when layering several deformation maps. The details fit the colour texture nicely. The downsides are the need to paint many deformation maps (about ten for the body alone), and having to switch back and forth between ZBrush and the paint program for every change in deformation. Worst of all, there was visible UV-stretching when deformations became too large.

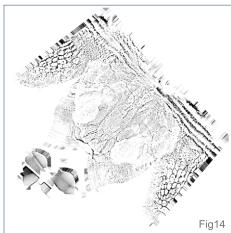
LIGHT SETUP

After detailing, I went back into Maya and set up an underwater photograph back-plate, and matched the lighting to it. The back-plate can be seen in Fig15.

The Volume light setup used Mental Ray physical light and the Mental Ray participating Volume shader, applied to a cube. The spheres in front of the Volume light were partially transparent, because of the visible streaks in the light cone. There was also a Fill light from below, and an IBL-gradient in the scene. The white sphere next to the head was not renderable and was used for the eye reflection only. The Volume light setup in Maya view port can be seen in Fig16, and the rendering result in Fig17.

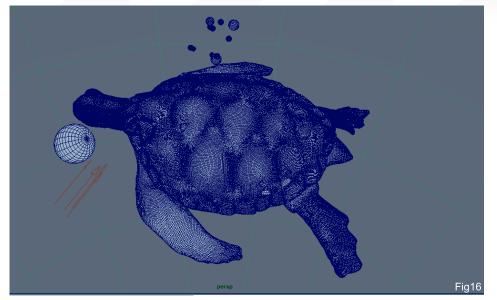




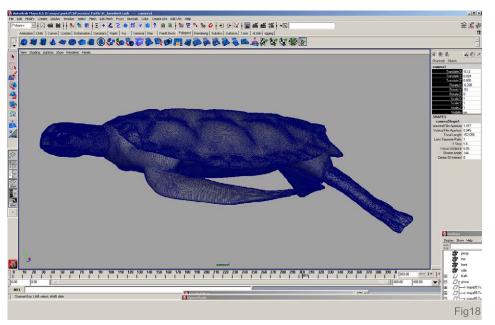




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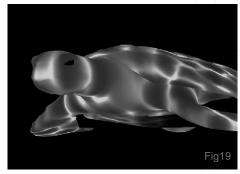


RENDERING

I re-imported the "cage object" models from ZBrush and smoothed them in Maya, by one level. I used the Mental Ray architectural material for all shaders, as non-Mental Ray shaders are known to not work well with the physical light. I applied the painted colour texture and the normal map. The cavity maps went into the extra colour as a multiplier. The re-imported and smoothed 1 or 2 level cage objects can be seen in Fig18.

COMPOSITING

I rendered everything in Mental Ray in 2K resolution and 16-bit colour depth. Because it's a still image, there were several passes for the lighting. I then put them all together in Photoshop. Some render passes: projected caustics and self shadow passes can be seen in





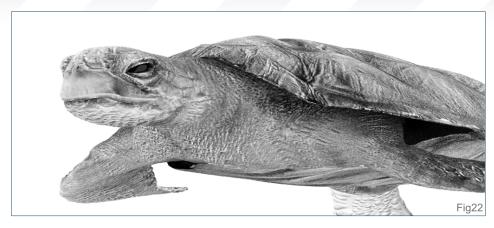


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Fig19 - 20; Volume light and Ambient Occlusion passes in Fig21 - 22; and Specular and Reflection passes in Fig23 - 24.

I had to do some painting for the generated normal maps and on UV seams in the finished image, where I had not ideally placed the position of the camera. I finally applied depth of field using a Z-map, and used a Photoshop lens blur. The result can be seen in Fig2h.



KATRIN SCHMID

For more from this artist visit: http://www.lo-motion.de Or contact: katisss@gmx.de









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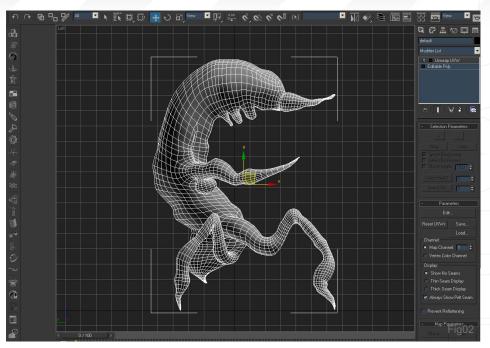
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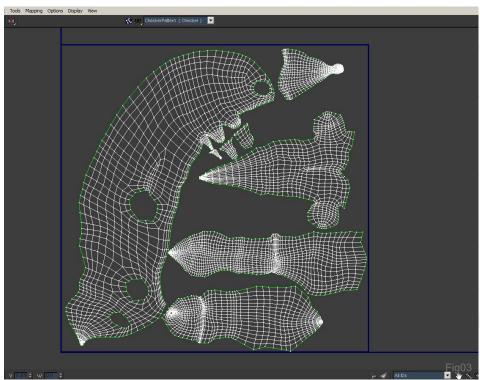
3DS Max, ZBrush, Mudbox and Photoshop

Avinash T. Hegde from India is currently working as a Lead artist at Aconygames in Germany, and would like to share with us the whole process of creating his 3D render of Carlos Huante's creature concept...

This process will show different stages of the complete artwork from a basic 3D mesh, adding details using Skymatters Mudbox, to rendering the final model in 3DS Max with Brazil, and with completed textures in Photoshop. Firstly, I must give thanks to the great artist Carlos Huante for inspiring me to create my 3D artwork; I am a huge fan of his work and I have learnt a lot about anatomy, creature design and colours from his work. I find his creatures awesome, and they have a great sense of anatomy and organic form even if they are a fantasy concept. So, hats off to Sir Carlos Huante (Fig01)!







STEP 1

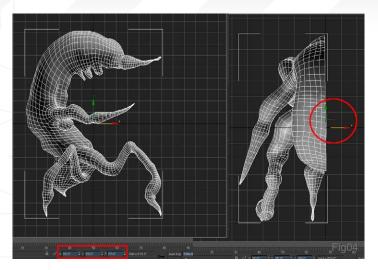
First of all, I started modelling the base mesh with proper mesh flow in 3DS Max using polygon tools, starting with a box. I also kept in mind that the model had quads only, and no tris, as it was to be later sub divided in Mudbox (Fig02).

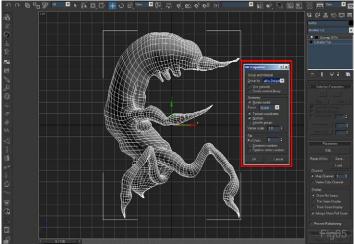
STEP 2

Once I was satisfied with my base mesh, I started doing the unwrapping for the mesh in Max using the unwrap tools. I made sure there were no overlaps or stretching in the UVWs, because good UVWs are a must for every major step ahead in the process, whether it's normal map generation or texturing. So, I spent quite some time on this boring process (Fig03).

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STEP 3

Once I felt that the UVWs were good enough, I started preparing the model ready for exporting it into Mudbox for high poly detailing. As you can see in Fig04, I set the pivot point of the model to the centre and all coordinates to zero. You can also see that the model is half built at this point, which is because, after looking at the concept, I decided to model just half of the creature and then mirrored it later on. I also planned to show just the profile of the model, as it is in the concept (Fig04).

STEP 4

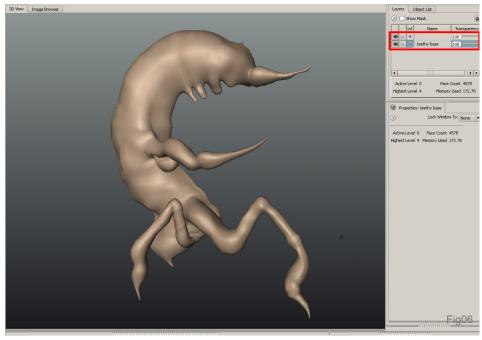
Fig05 shows a screenshot of the OBJ export options. This model, with complete UVW mapping, was ready to go into Mudbox in .obj format for a higher level of detail (Fig05).

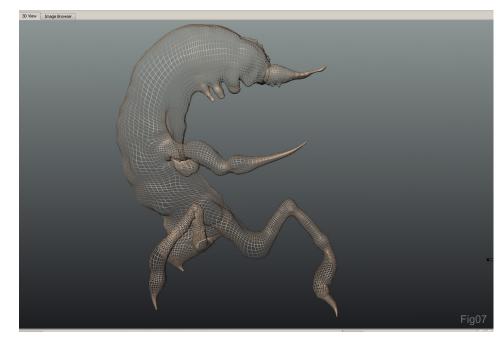
STEP 5

As you can see, the base mesh was successfully imported into Mudbox, and I prepared it using a proper naming convention - which is very important because everything should have a name (Fig06). (Now the fun begins! Mudbox Rocks!)

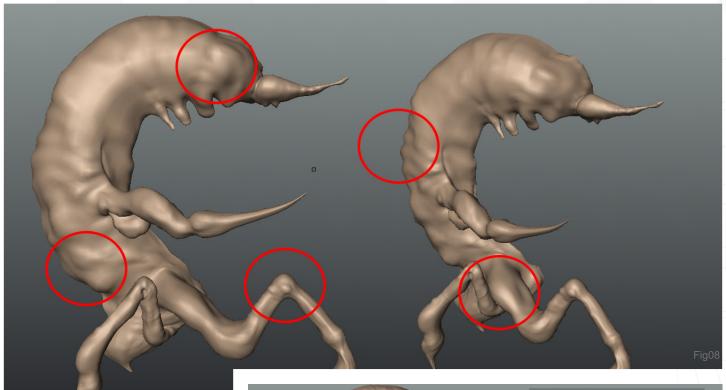
STEP 6

I subdivided the mesh to 1 level in Mudbox in order to start sculpting the details. As you can see in the wireframe image (Fig07), the mesh density has increased from the original mesh that we imported.





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STEP 7

(The fun has already begun!) I firstly started sculpting and giving mass details to the creature. I studied the concept and tried to finish the basic mass and shape of the creature using a combination of bulge, move and smooth brushes to achieve my goals (Fig08).

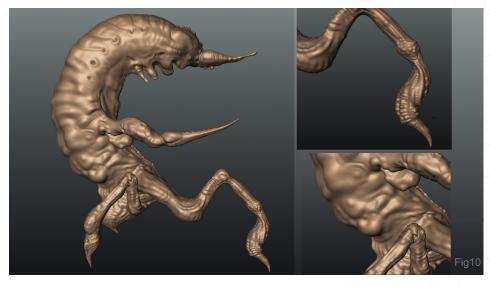
STEP 8

As you can see in Fig09, I started increasing the level of details. With each and every part, I slowly tried to spend more time studying the concept and the style of the concept artist, whilst also trying to add my own details to the model (Fig09).

STEP 9

I subdivided the mesh again to level 2, and started working more details into the model, this time adding more flesh and small organic details to it. I liked this part a lot; I used normal sculpting tools like bulge, soft and smooth brushes (Fig10).





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STEP 10

More subdivision; more details. This time I concentrated on doing skin folds, stretches, and things like pores and boils. I am totally in love with Mudbox, and doing this has never been easier (Fig11).

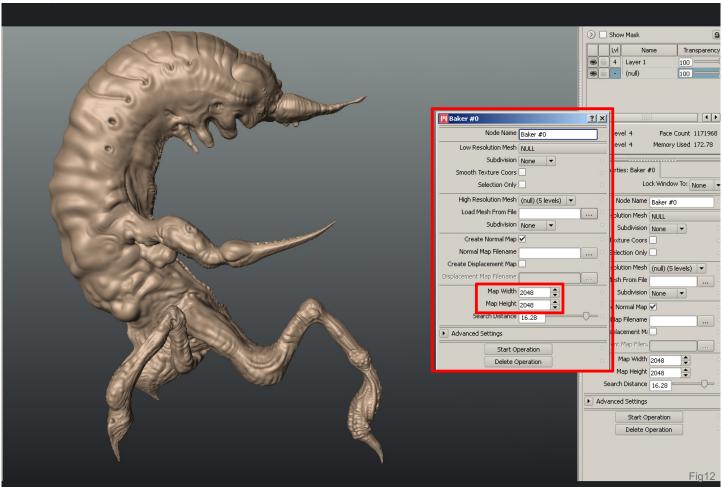
STEP 11

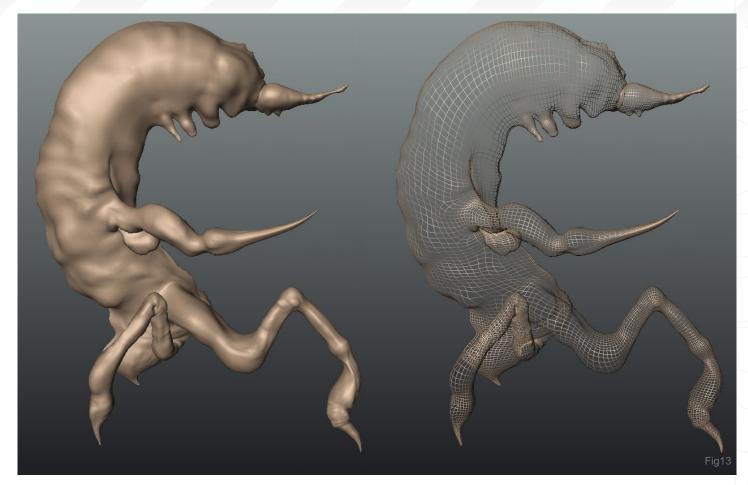
Satisfied with the detail of the model, the next step was to generate a nice normal map. Fig12 shows the settings and the image size of the normal map; I specified subdivision level 1 as my low poly mesh, and used the highest subdivision level as my high poly mesh. The normal map generated was my base bump and diffuse map. I hit the operation button and the map was ready in the path I specified (Fig12) - it's so simple!

STEP 12

As you can see in Fig13, I then exported the







level 1 mesh from Mudbox into 3DS Max. This mesh has higher mesh density than the original base mesh and has more mass details (Fig13).

STEP 13

The mesh was imported into 3DS Max using the .obj import option. It was then ready to have a shader pass on it and I was able to test the normal map that I had generated (Fig14).

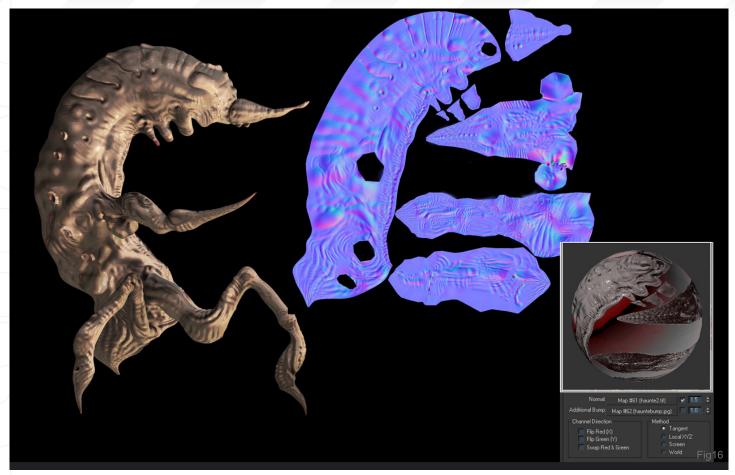
STEP 14

Fig15 shows the test render of the mesh. I applied a skin shader from

Brazil's rendering system. I always use this shader with creatures and characters because it is easy to use and gives some awesome results with subsurface scattering, and has a real skinlike quality (Fig15).







STEP 15

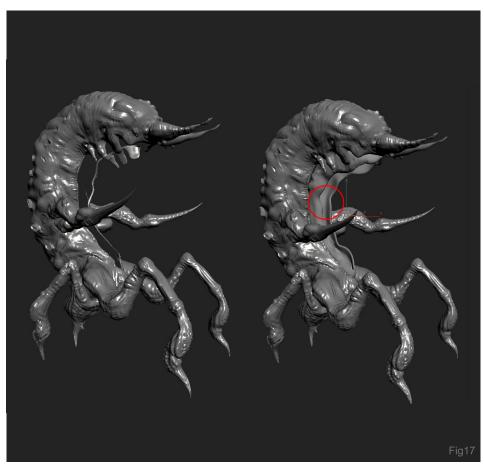
The above (Fig16) image shows the normal map generated in Mudbox, plugged into the shader, and the test render shown with the model. I left this here at this point, as later on I planned to tweak the shader more with more detail, once I was done with the diffuse map and lighting (Fig16). (See you soon, Shader!)

STEP 16

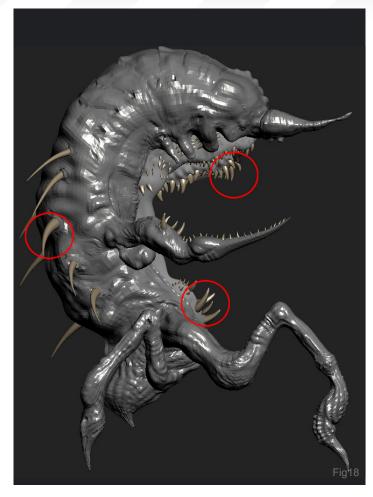
I then mirrored the mesh and started modelling the mouth, along with other important small details which were to bring more life into this creature (Fig17).

STEP 17

I added more details to the model, like the teeth, and those spikes on his back. The creature received all of his beauty elements at this stage - I love that he has lots of teeth to eat puny humans! The next step was to add some colour to it, and so I moved into Adobe Photoshop



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- another program which I love and cannot do without (Fig18).

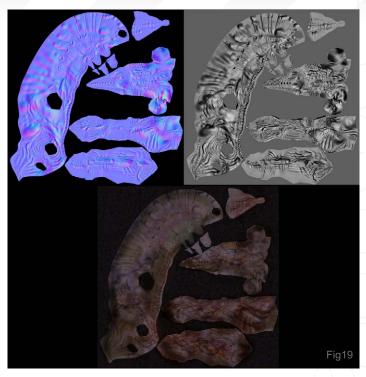
STEP 18

Now it's time to colour! As you can see in Fig19, I used the normal map, which was generated in Mudbox, as a base for all maps; I desaturated the normal map and generated a fake occlusion (which works for me) and started hand painting the colours. By the way, I only use a mouse for modelling and painting - I never use a tablet. I love my mouse and I am very comfortable working with it. Some people call me the 'Evil Mouse Guy'. So, I started painting organic flesh colours whilst checking a lot of reference material from Carlos Huante

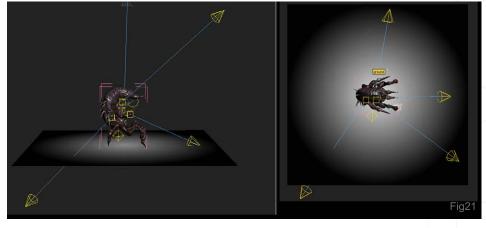
to see how he used interesting colours for his creatures. I also kept all of my layers for different colours so that I could tweak them. Details like spots and strokes were also added on a different layer so that I could tweak or blur them later. To test the colour in the 3D renderer, I plugged it into the skin shader (Fig19).

STEP 19

Fig20 shows the screenshot of the Brazil skin shader preview in 3DS Max. I then had to set up













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FERRARI F-1 2000 MICHAEL SCHUMACHER

CREATED IN:

V-Ray, Adobe Photoshop CS2

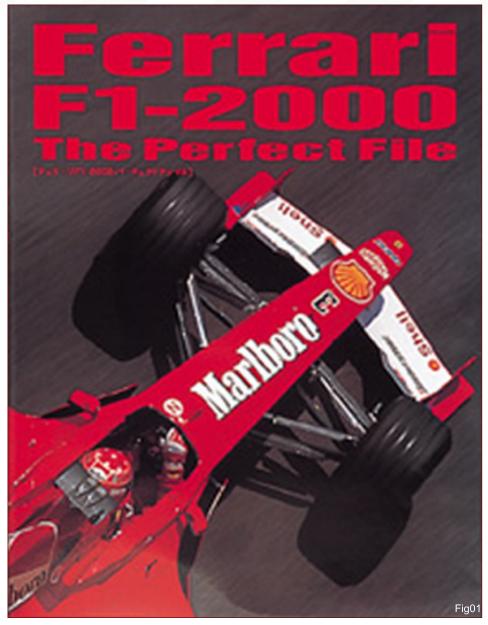
INTRODUCTION

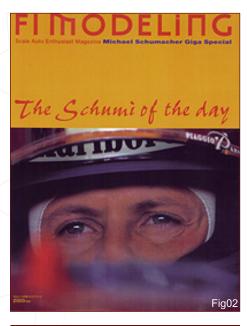
Formula One cars are always fascinating me by their technology, shape and speed. Drivers are not only required to have superior driving skills, but must also have sharp focus, fast reactions, and high fitness levels. To be on top of the game you need more than to simply become a superstar.

The image, Ferrari F-1 2000 Michael Schumacher, was inspired by the moment when Michael Schumacher crossed the finish line of the 2000 Formula One Australian Grand Prix.

STARTING POINT

To begin this project, I started by collecting as much reference material as I could possibly find (images, technical data, and even the box of a Tamiya F1-2000 scale model) (Fig01 - 04). I chose to use V-Ray for this particular project due to its fast and amazing quality renders.







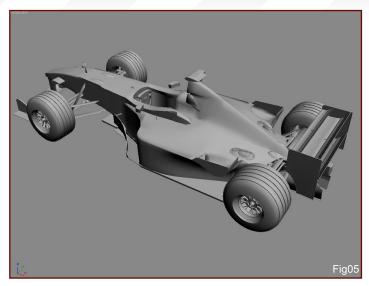


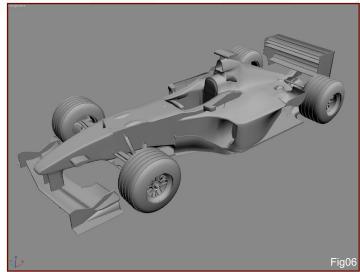
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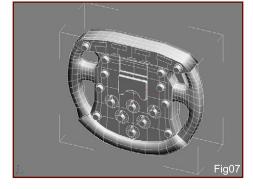
Making Of FERRARI F-1 2000 MICHAEL SCHUMACHER

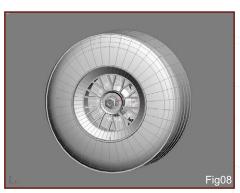




MODELLING

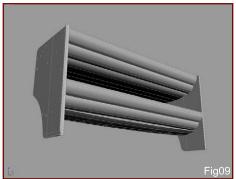
The modelling process was smooth and easy due to large amount of reference material that I had with me. The entire modelling process was done in editable poly. I also set up the basic lighting and camera during the modelling stage, as this helped me to judge the accuracy of the shape from different angles (Fig05 - 12). Logos on the car were collected from images on the Internet and sponsors' websites.

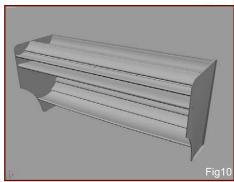


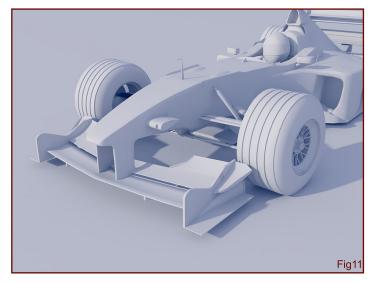


TEXTURING

After the modelling part came another exciting part of the project: UV unwrapping and texturing. To unwrap the car wasn't too difficult, I just had to make sure that there were no logos being stretched or flipped up-side down. The environment textures, such as the background













drop (crowds), grass, road surface and so on, were all real photographic references and textures - all done in Adobe Photoshop CS2 (Fig13 - 15 & Fig16a - d).

LIGHTING/ CAMERA ANGLE

Before I started playing around with lighting and camera angles, I had a look some of the most famous motor sport websites, such as Sutton Images, Cahier Archive and many others, to study camera angles and composition in order to get the right feel for the speed and excitement of the sport. To begin with, I set up several cameras around the car; low angle, fish-eye, wide angle, birds-eye view, side view, and I made some renders to see which angle came in the best. I then used the initial lighting, which I had already set up previously, and started playing around with the shadow angle, brightness, contrast, and also started testing the reflection with an HDRI map. I had a look at several V-Ray tutorials on the Internet which covered the setups for realistic paint











Making Of FERRARI F-1 2000 MICHAEL SCHUMACHER

reflections. For Formula One cars, the paintwork is extremely glossy. I tried not to overdo the reflection, because sometimes bad reflections can kill the realism.

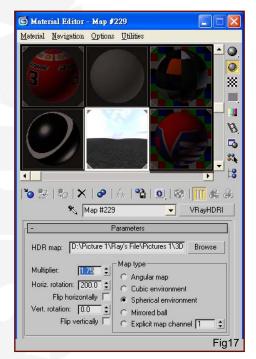


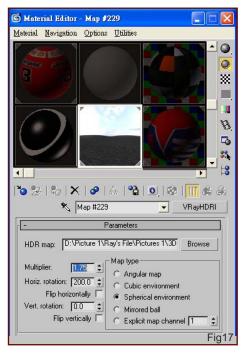
Fig17 shows the basic V-Ray material setup for the main body of the car. After I had done the material setup, it was then time to test whether it worked with the environment and camera angle. Sometimes, during a high-speed shot, you don't see much reflection from the car if the camera is not close enough to the car's surface to cause one, so I started by setting up a scene with the camera angle which I had chosen to use for the final render. I used three spheres to test the material; red and white are the main colours of the car, so I picked the texture for the main body and the texture for the front wing to test the reflection. I adjusted the material settings to get it looking right in the scene (Fig15 and 26). I chose V-Ray for the rendering and lighting, and was amazed by the simplicity of setting up the exterior light and HDR for the scene. The main Key light (sunlight) was positioned in the scene and was used to test shadows and the camera angle, and the HDR map was then positioned where the Key light had been placed.

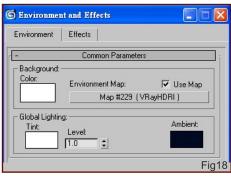
There are a lot of tutorials available on the Internet about setting up exterior lights using V-



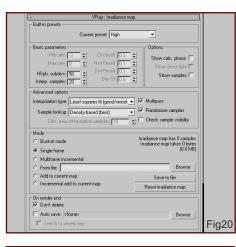


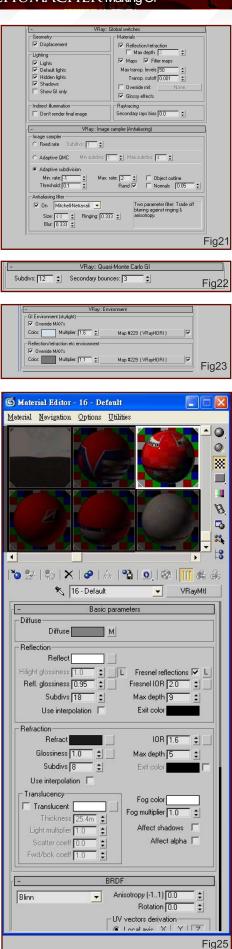
Ray, and tutorials about HDR, so I won't spend time discussing these processes in this article for this reason (Fig17 - 25).

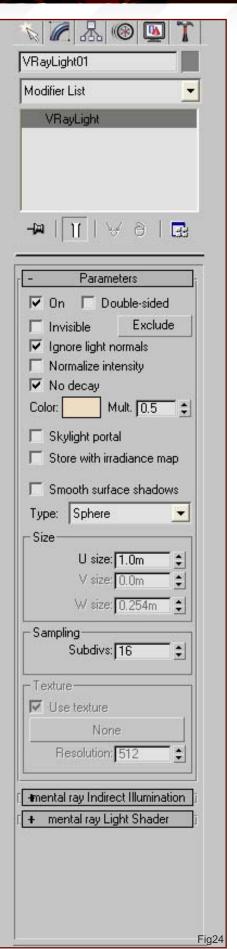












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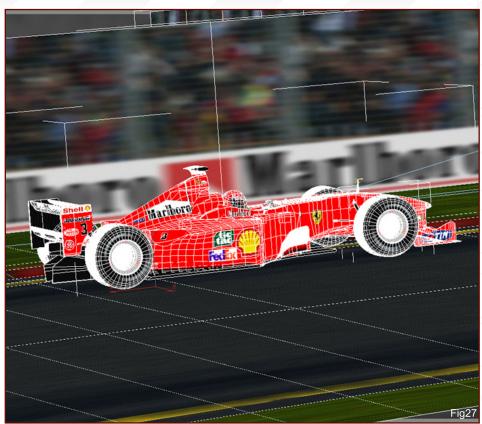
FINISH LINE

After all the hard work had been done, it was then time to click the render button and sit back and enjoy the final artwork (Fig26 - 28).

RAYMOND YANG

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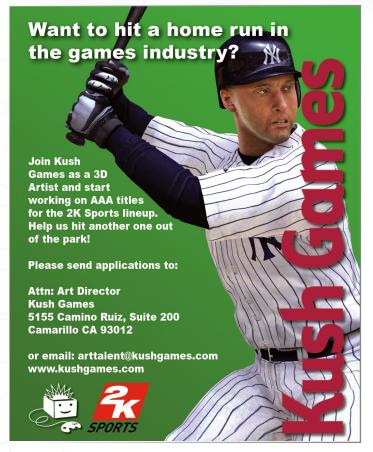
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3D environment lighting



series. Over the course of the next six months, this series will be detailing techniques on lighting an environment under a number of different conditions. Each month we will cover a step-by-step guide to setting up lights, aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light, and finally a submerged submarine light. The schedule is as follows:

Issue 023 July 2007

Natural Exterior Lighting Sunny Afternoon

Issue 024 August 2007

Natural Exterior Lighting Twilight

Issue 025 September 2007

Natural Exterior Lighting Moonlight

Issue 026 October 2007

ARTIFICIAL INTERIOR LIGHTING ELECTRICAL

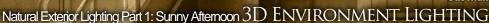
ssue 027 November 2007

Artificial Interior Lighting Candlelight

Issue 028 December 2007

ARTIFICIAL EXTERIOR LIGHTING UNDERWATER

ENJOY ...



3ds max

Natural Exterior Lighting Part 1: Sunny Afternoon

Welcome to the first part of this new set of tutorials. This month, we'll take a look at how to set up "sunny afternoon" lighting for our 3D environment. Before we start, I suggest we find some good reference material for our project. In Google, simply Search Images for "sunny afternoon" to discover some pictures which will give you an idea as to how light behaves at this time of the day. Even better, why not just go outside and examine how the light is behaving in the real world? ...

- Let's start by taking a look at our scene.
 Open the Ship Cabin_Part1_Starting.max
 scene (download can be found at the end of this tutorial; click on the Free Resources logo)
 (Fig01).
- 2. Examining the 3D scene, we can see that there are three main light sources (Fig02); the large opening in the ceiling, the small circular window, and the rectangular window on the back wall. We won't consider the artificial lights in the scene for this part, as this will be covered in following parts of the tutorial.
- 3. We will use the Mental Ray renderer for our scene, so let's start by activating it before we get to work on the lighting in our scene. Open the Rendering panel (use the F10 short-cut key), scroll down into the Common tab, and click on the button with the three dots in the Assign Renderer roll-out menu. A browser window will open; select Mental Ray Renderer and click the OK button (Fig03).

Fig 01

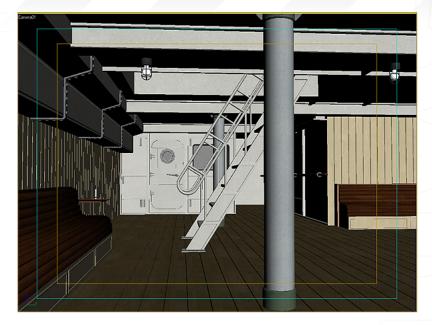
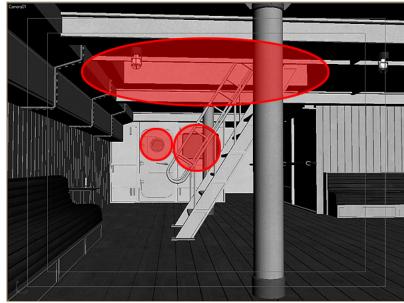
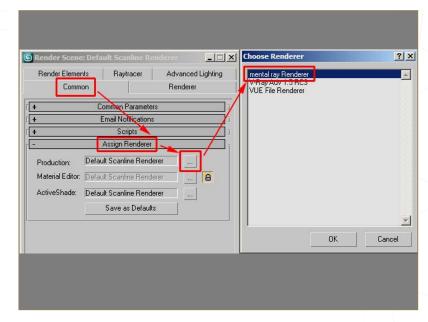


Fig 02

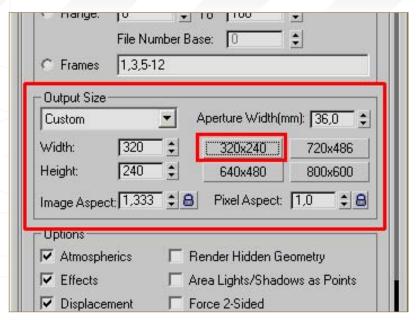






3D ENVIRONMENT LIGHTING Natural Exterior Lighting Part 1: Sunny Afternoon

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4. Since we'll be doing a lot of rendering tests in this project, we can't wait too long for each render. We therefore need faster feedback to make any adjustments and changes. So let's set the rendering size to 320 x 240 - this way it will render faster. We'll increase the resolution only for the final renders. Open the Rendering panel again and set the Output Size to 320 x 240 (Fig04).

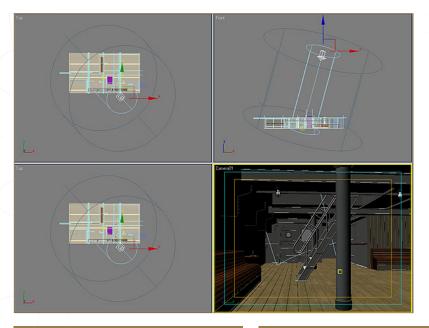
Fig 04

Fig 06



Fig 05

5. If we render the scene now, we'll see just the default lighting since there are currently no lights in the scene (Fig05).



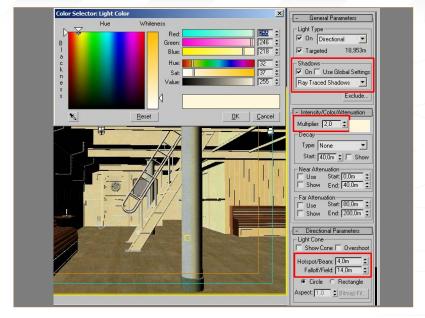
6. Create a Target Direct light and position it as shown in Fig06.



Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

7. Enable Shadows and set its type to Ray Traced Shadows. Set the light Multiplier to 2 and change the colour to something like R=255, G=246, B=218. You will also need to copy the parameters for Hotspot and Falloff from those detailed in Fig07.

Fig 07

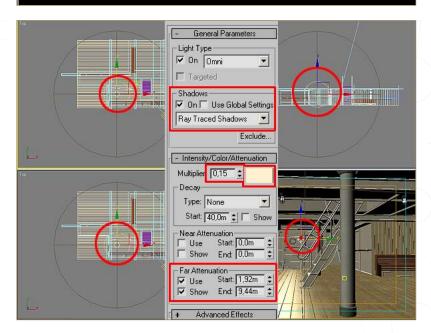


8. Render the scene again (Fig08). Now we can see our main light source (the Sun) coming from above and casting shadows into the ship's cabin. The scene is almost totally black, so we need to create at least one other light source coming in from the two windows on the back wall.

Fig 08



9. Create an Omni light and position it as shown in Fig09, right between the two windows. Make sure that the light is inside the cabin, as we need it to light that area slightly. Set the Multiplier to a low value, like 0.15, and its colour to R=255, G=242, R=208. Make it cast Ray Traced shadows and enable the Use and Show options for the Far Attenuation. Also, set the Start to 1,92 and the End to 9,44.



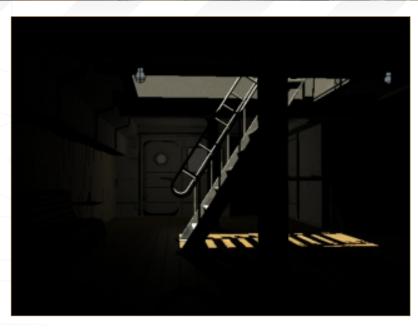


Fig 10

10. Render the scene again (Fig10). Now there is much more light, especially at the back of the cabin, but the scene is still way too dark. We need some bounces of light over the entire scene.

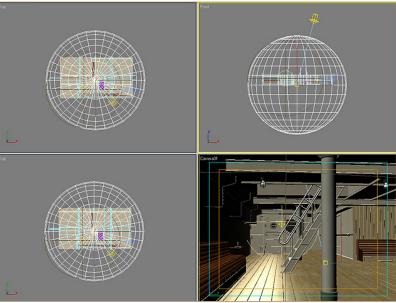


Fig 11

11. Create a sphere that surrounds the whole scene (Fig11).

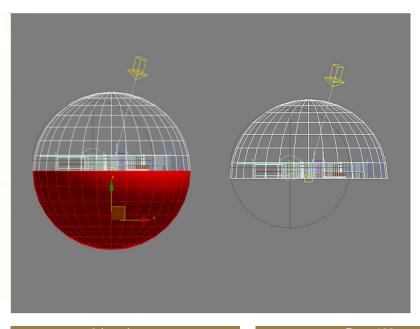


Fig 12

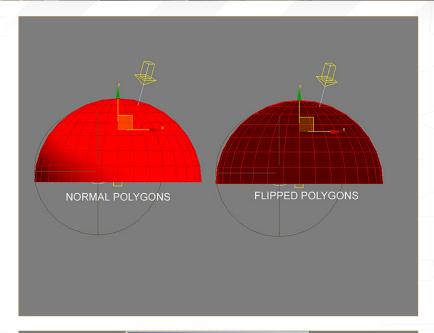
12. Make the sphere an Editable Poly object, and then select the lower half's polygons and delete them (Fig.12).



Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

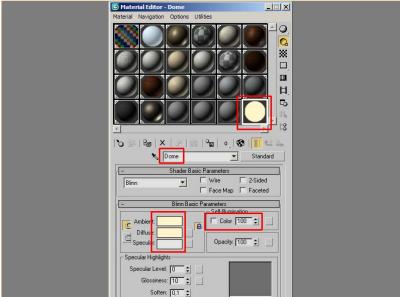
13. Select all of the polygons (Ctrl + A) and flip them using the Flip command in the Command Panel (Fig13). We'll assign a self-illuminated material to the sphere, so we need its polygon to point inwards.

Fig 13

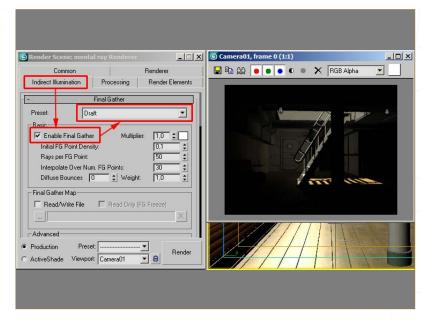


14. Open the Material Editor and create a new Standard material. Name it "Dome" and change its Diffuse colour to something like R=255, G=245, B=203 (Fig14). Also, set its Self-Illumination value to 100 (Fig14).

Fig 14



15. Open the Rendering panel and switch to the Indirect Illumination tab and enable Final Gather. Set the Preset to Draft and render the scene. This time the render will take a little longer, since we enabled the Final Gather feature of Mental Ray. This option takes care of the secondary bounces of light, or indirect illumination. We have some more bounces of light in the scene, but it's still too dark (Fig15).





3D ENVIRONMENT LIGHTING Natural Exterior Lighting Part 1: Sunny Afternoon

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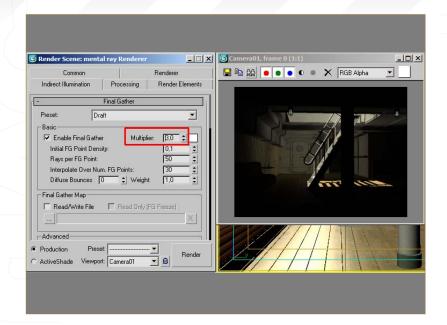
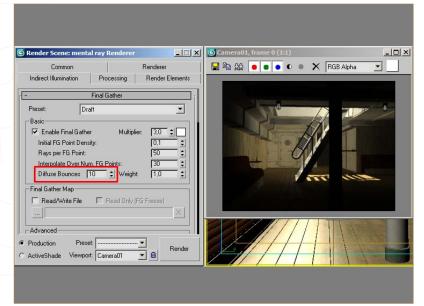


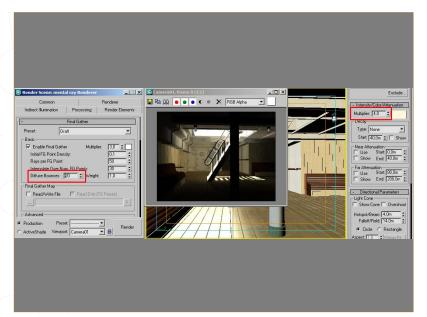
Fig 16

16. Set the Final Gather Multiplier to 3 and render again. Now we have some more light, but we need to tweak the FG parameters a little (Fig16).



17. Set the Diffuse Bounces to 10 and render again. Now there's a fair amount of light in the cabin, and we start to see objects that were much too dark before, like the seat on the left (Fig17).

Fig 17



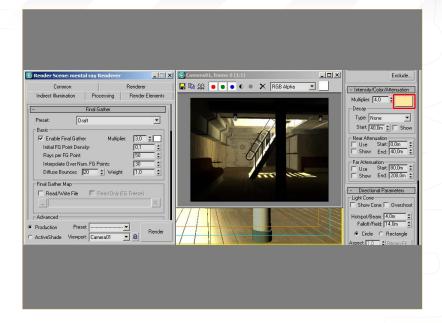
18. Set the Diffuse Bounces to 20 and increase the Direct Target light's Multiplier to 4. Render the scene again (Fig18).



Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

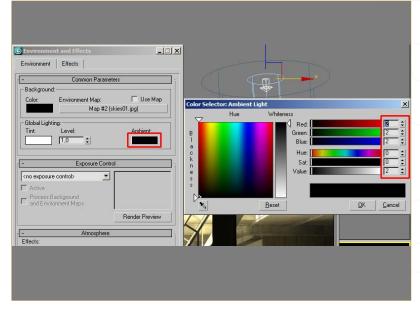
19. Since we increased the light's Multiplier, it is now "over-burning" the areas where it directly hits the surfaces. So let's change the light's colour to something warmer and more saturated, like R=255, G=231, B=159. Also, make sure that H=32, S=96, and V=255. Render the scene again. Now it looks better (Fig19).

Fig 19



20. To add another little bit of light, we can add some value to the Ambient light. Open the Rendering/Environment tab and set the Ambient value to a *very* dark colour, as shown in Fig20. The brighter this value, the more over-exposed the rendering will be, so do not exaggerate the effect.

Fig 20



21. Now we can start making some test renders with a higher resolution. Set it back to 640 x 480 and render the scene (Fig20).





3D ENVIRONMENT LIGHTING Natural Exterior Lighting Part 1: Sunny Afternoon

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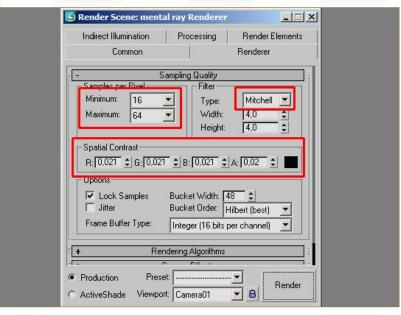


Fig 22

22. Since we are getting close to our final render, we now need to increase the level of detail and quality. Let's start from the Anti-Aliasing filter. Open the Rendering panel and go to the Renderer tab. Set the Filter to Mitchell and the Min/Max to 16/64. Also, lower the Threshold values as shown in Fig.22. This time it will take a little longer to render the scene, but you will see a lot of details that were lacking in previous renders.

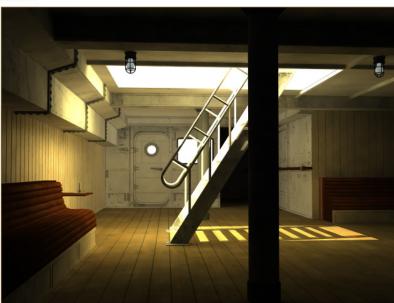


Fig 23

23. Now let's raise the quality of the Final Gather. Set the Preset to High and render again. It will take even longer to render than before, but the final image will be much better in terms of its quality and detail (Fig23).

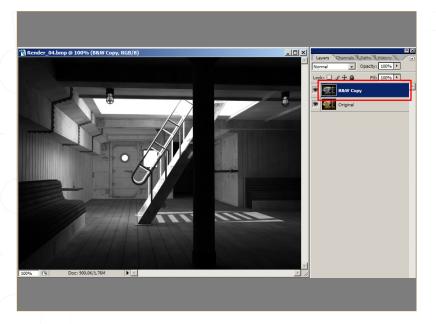


Fig 24

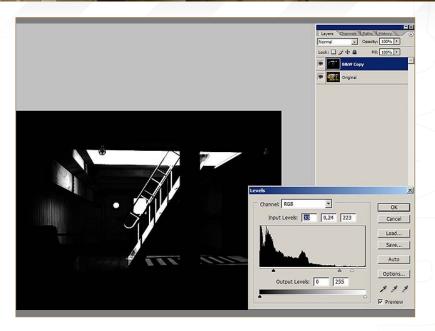
24. Now that we have a pretty good lighting setup for our scene, we can start to tweak the final render with 2D software, like Photoshop. Open the rendered image in Photoshop, duplicate the original layer and Desaturate it, as shown in Fig24.



Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

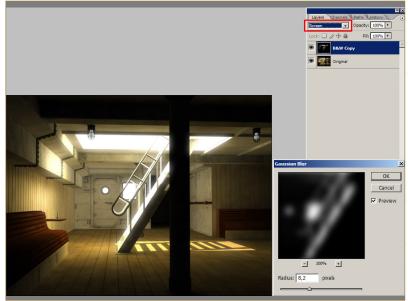
25. Adjust the Levels until you get something similar to Fig25. We just need to extract the areas of the image with more light.

Fig 25



26. Change the Blending mode for the top layer to Screen and apply a fair amount of Gaussian Blur (Fig26).

Fig 26



27. Set the top layer's opacity to a lower value, and change the Hue & Saturation to something warmer (Fig27).

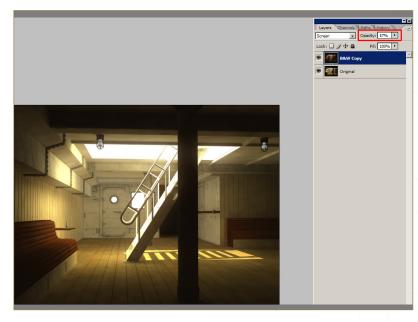




Fig 28

28. Go back to 3DS Max now and reset the Renderer to the Default Scanline. Create a new Standard material in the Material Editor and set its Diffuse colour to pure black. Assign this material to every object in the scene. Select the main Spot light, go to the Environment menu and add a Volume effect. Pick the Spot light and render the scene. You should get something similar to Fig28.

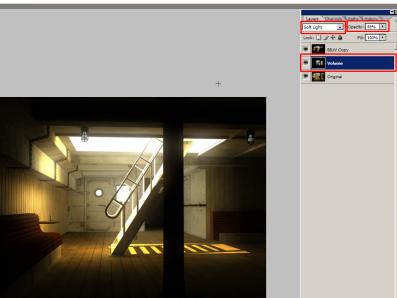


Fig 29

29. Import this new render into Photoshop and put it right between the top and bottom layer.

Also, set its Blending mode to Soft Light and its Opacity to 69 (Fig29).

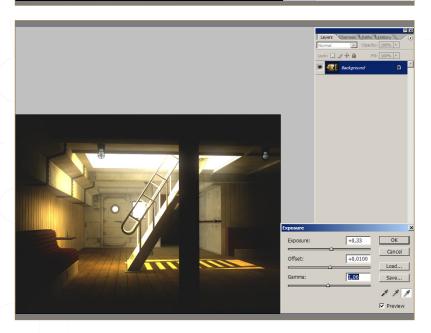


Fig 30

30. If you want, you can improve the exposure of the picture with the Exposure tool in Photoshop.

3D Environment Lighting

Natural Exterior Lighting Part 1: Sunny Afternoon







3D environment lighting



'3D Environment Lighting' is our new 6-month tutorial series. Over the course of the next six months, this series will be detailing techniques on lighting an environment under a number of different conditions. Each month we will cover a step-by-step guide to setting up lights, aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light, and finally a submerged submarine light. The schedule is

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CANDLELIGHT

ssue 028 December 2007

Artificial Exterior Lighting Underwater

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Natural Exterior Lighting Part 1: Sunny Afternoon

Welcome to this new series of tutorials which we will follow over the next six months. These tutorials are all devoted to lighting. In fact, we will learn how to illuminate a scene under different environmental conditions. As you already know, when illuminating a realistic scene, the use of the Global Illumination is required. Fortunately, Cinema 4D offers a solution which is pretty quick and simple to obtain renders of a high quality - you just have to be patient though, because Global Illumination means longer render times! In this first tutorial we are going to illuminate a ship's cabin using natural exterior light - the Sun. The environmental condition for this will be sunlight flooding through windows on a sunny afternoon.

- 1. First of all, open the scene (download can be found at the end of this tutorial; click on the Free Resources logo) and examine it. You can see that in the cabin there is an opening in the ceiling. The Sunlight will illuminate the room by flooding through this opening in the ceiling. Since we are using Global Illumination, we have to turn off the Auto Light (Render Settings > Options > Auto Light: Off). I then suggest you also disable the Anti-aliasing (AA) parameters (Render Settings > Anti-aliasing: None) as this will allow you to save time in the rendering phase. We will enable the AA for our final render (Fig01).
- 2. Before inserting the sunlight, add a Sky object in the scene, and then assign to it a material that has a Gradient as a texture in the Illumination Channel (Fig02). This Sky object will generate the Global Illumination.
- 3. This one Sky object cannot represent the illumination system. In fact, Fig03 shows how dark the room is with this. Since the environmental condition here is a sunny afternoon, we need a light source that will simulate the Sun. You can see from Fig03 that

Fig 01

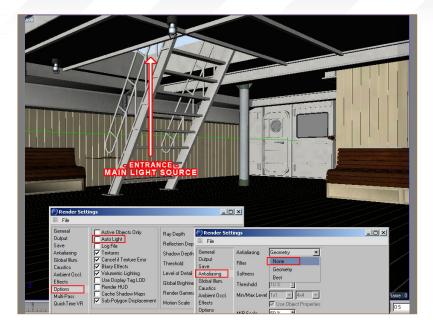
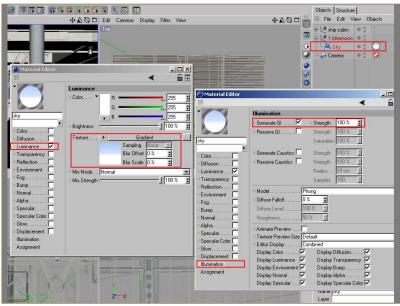
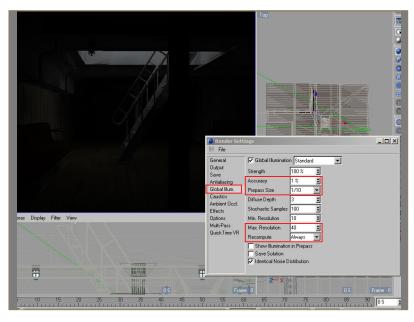


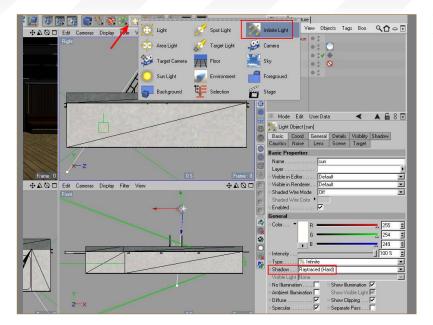
Fig 02

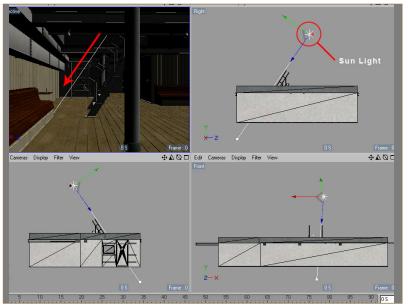






Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING





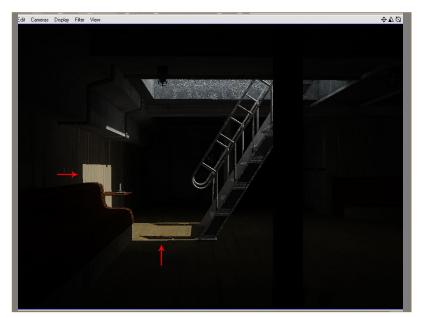


Fig 04

I changed the default settings of the Global Illumination. These low settings allow us to render in a shorter time, and we will therefore use these settings for quick tests.

4. As I mentioned before, we have to insert sunlight into the scene, so from the main menu (Objects > Scene) choose the Infinite Light.

Set up the Shadow as Raytraced (Hard). In reality, when an object is illuminated by direct light from the sun, it will cast clean shadows and their edges will be defined. When an object is illuminated by indirect light, its shadows will be blurred and its edges will be less defined. The definition of the edge of the shadow also depends on the height of the objects. The colour of the light is a very bright yellow and its Intensity has been set to 100% (Fig04).

Fig 05

Now position the Sun Light, as shown in
 Fig05. Its inclination angle is set to about 55°.

Fig 06

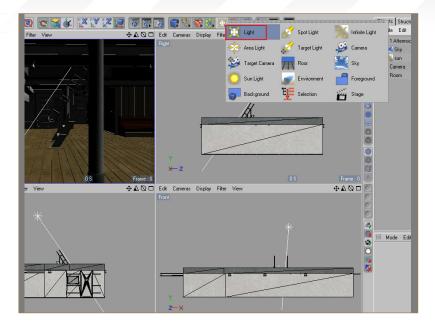
6. Let's make a test render now, just to help explain what I talked about in the previous paragraph (Fig06). You can see from image how the edges of the shadow are well defined.



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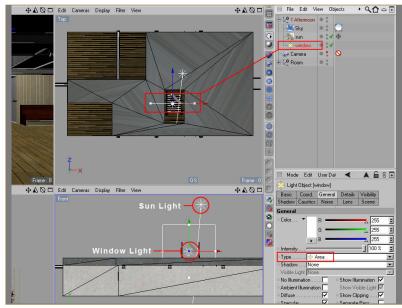
7. You will notice that the room is still very dark. If we want to obtain a realistic render, we will have to increase the values of the parameters of the Global Illumination. The higher the values, the longer the render time will be. Since we want to find compromise between quality and time, I will add a new light, as shown in Fig07.

Fig 07

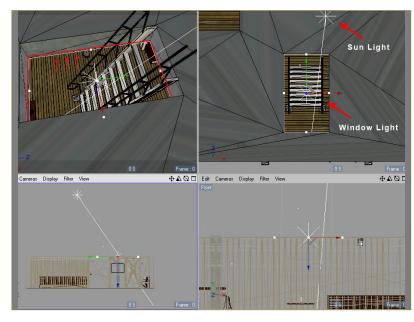


8. I will call this new light, "Window". Position the Window Light in correspondence with the opening in the ceiling, as seen in Fig08. In the Light properties, change the default type to Area, as shown on the bottom right of Fig08.

Fig 08



9. You will now notice that the shape of the light is a rectangle. Position the Window Light as seen in Fig09. The size of the light must cover the whole opening, and the light must be positioned in correspondence with the bottom edges of the hole, as shown on the top left of figure. This light has the job of spreading the sunlight. Think about an object that, when it is hit by sunlight, it multiplies the light - it acts as a sort of amplifier, or multiplier...





Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

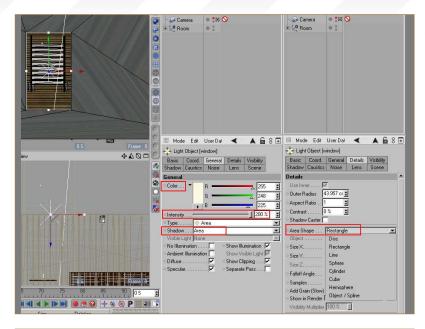


Fig 10

10. Go back now to the properties panel of the Window Light. Change the default colour and increase the Intensity, as seen in Fig10. Choose Shadow as the Area type. This shadow is the blurred type that we spoke about in paragraph 4. You will now notice that, in the cabin, some objects are directly being hit by the Sun Light, and these objects will cast Raytraced shadows.

thanks to the Area light. You may change the shape of the Area light, as seen on the left of figure, but in this example the shape of the Window Light will remain a rectangle.

The rest of the cabin will cast soft shadows,

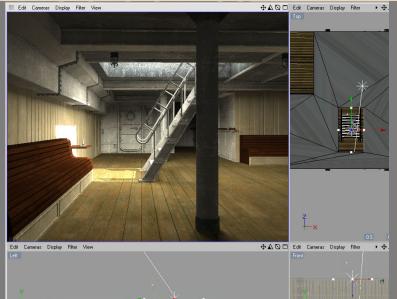


Fig 11

11. Let's now make a render to see how things are going... Well, the room is much brighter now. You can see that the shadow of the staircase is better defined than the shadow of the column, and this is the practical demonstration of the concept that I explained previously.

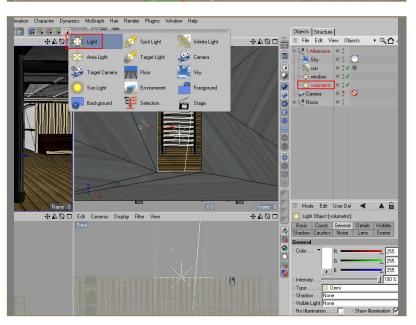


Fig 12

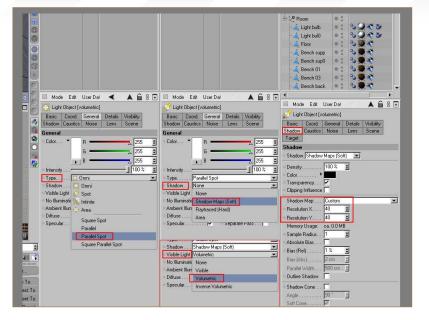
12. Now, the scene is missing something that will make it more realistic. In the next paragraphs I am going to show you a trick that gives a nice realistic mood to a scene. For now, add another light, as shown in Fig12. I called this light, "Volumetric". This light will have the task of simulating the volumetric effect of the sunlight.



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13. In the Light properties, change the default settings, as seen in Fig13. Choose the Parallel Spot type with Shadow Maps and Visible Light. In this case, the visible light will be Volumetric. This light should not produce shadows, however if we disable the shadows, the light will cross the walls. So, change the default values of the Resolution of the Shadow Map, as shown on the right of Fig13. This will allow you to have some almost non-existent shadows.

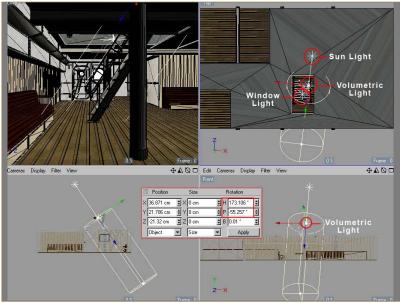
Fig 13



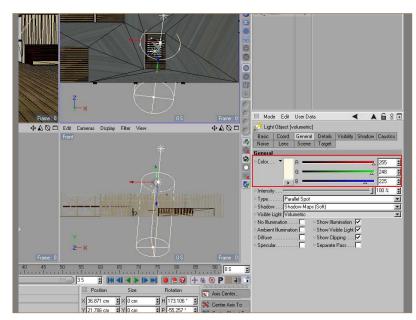
14. You can now see from Fig14, that the shape of this light is similar to a cylinder, and it fits for the type of effect that we are looking for.

Position the Volumetric Light, as seen in Fig14, and give it the same rotation values that the Sun Light was given.

Fig 14



15. Finally, change the default colour of the Volumetric Light to yellow - a bright yellow - as shown in Fig15.





Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

Fig 17

Fig 18

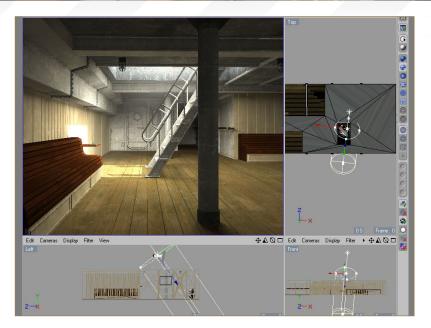
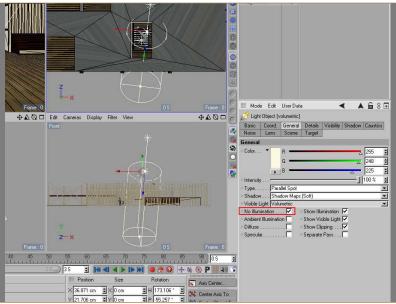
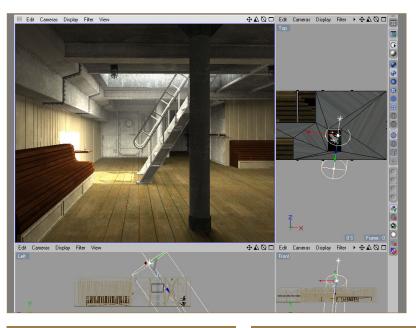


Fig 16 16. Now make a render (Fig16).



17. This light will not produce light, so go into its properties and check the No Illumination parameter. In this case, we won't need to worry about shadows because this type of light won't cast any.

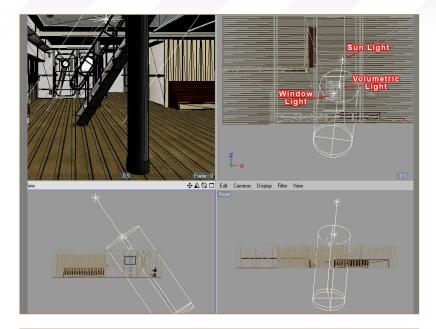


18. Now make a render to see how things are going (Fig18). We can see that the ray of light enters into the room just as it would in the real world. This volumetric effect gives the scene a realistic mood.

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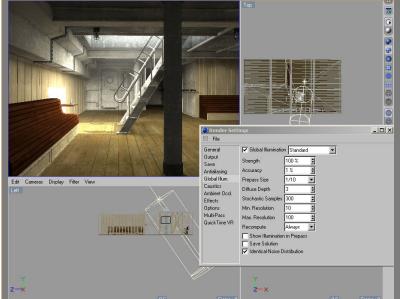
19. Our Lighting Rig is finally complete. To summarise, our scene has three lights and an object sky. The object sky produces the GI, the Sun Light simulates the Sun, the Window Light multiplies the light of the Sun Light and, finally, the Volumetric light gives the scene a volumetric light effect (Fig19).

Fig 19

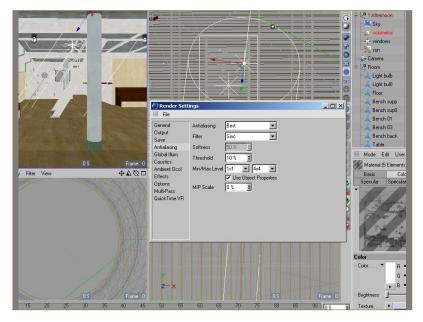


20. We are now ready to make tests renders. In Fig20, I changed some parameters of Global Illumination, to: Stochastic Sample = 300; Max. Resolution = 100.

Fig 20



21. Before launching the final render, we have to enable the AA. In Fig21 you can see the settings of the Anti-aliasing.





Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

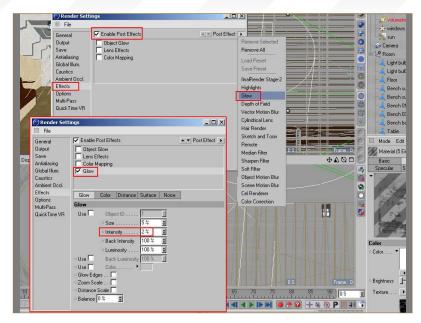


Fig 22

22. I added a Post Effect for the final render.

This Post Effect is a Glow, and if you appreciate it you may also wish to add the same glow to your own scene. You can find this effect in the

Post Effect list, as shown in Fig22.

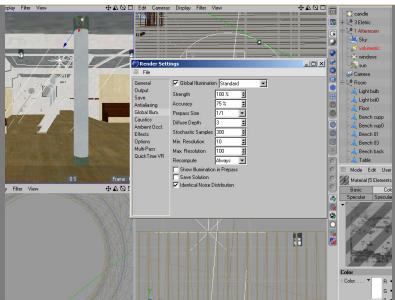


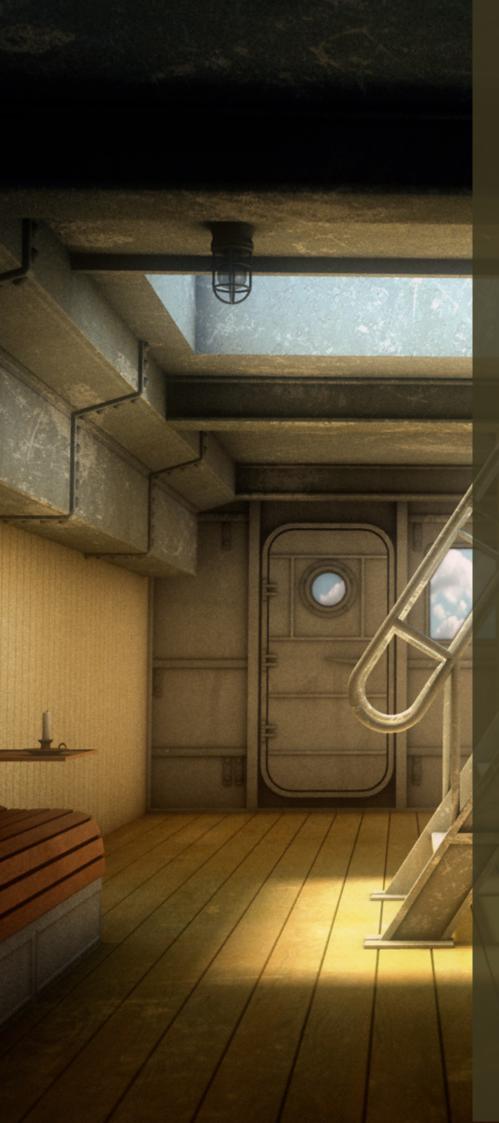
Fig 23 23. Now it's time to change the Global Illumination settings for our final render (Fig23).



24. This is the final result after a 4-hour render (Fig24). We can now stop here, because the final image fully satisfies our intended goal (Fig24).







3D environment lighting



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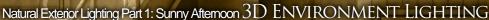
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(ightwave

Natural Exterior Lighting Part 1: Sunny Afternoon

Fig 01

In this tutorial, I am going to show you an example of how to create a warm and friendly lighting condition, such as you would find on a sunny day. Our scene is a ship's interior, and what we looking to achieve is the lighting effect of a "sunny afternoon". We are using the latest Lightwave version 9.2, but you should be able to follow this tutorial with older versions, as well.

- 1. Have a look at the 3D model we are using for this tutorial (download can be found at the end of this tutorial; click on the Free Resources logo). It is fully closed on all sides, has a very large opening in the roof, and two small windows in the door (Fig01).
- 2. When you look through the camera, try to imagine what you would like to achieve, here. This scene is very versatile; it can be a room inside of a ship, but it could also easily be a scene on a deck with direct sunlight shining onto it. These different approaches will dramatically change the that way in which we would light the scene, of course. As the title suggests natural exterior lighting, we finally decide upon the interior scene with light coming in through the windows.

In this scene, there will only be very few lights. When there is no direct light, the scene will be dark. This can be avoided using Indirect/Diffuse lighting (Fig02).

3. We start with the Ambient light. Change the colour to blue and make sure the intensity is set to around 5%. We now need the direct sunlight, which will be the most important factor in this scene. Change the default Light Type to Area, and choose a light orange colour for it. Lightwave 9.2 Area Lights are not that strong now, so we are going to use a Light Intensity of around 180% (Fig03) as compensation.

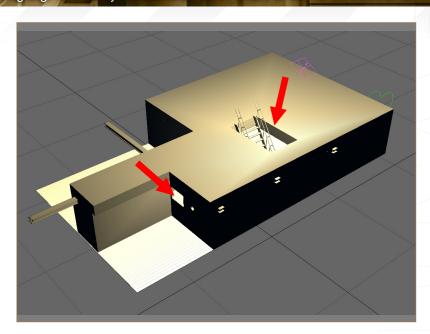


Fig 02





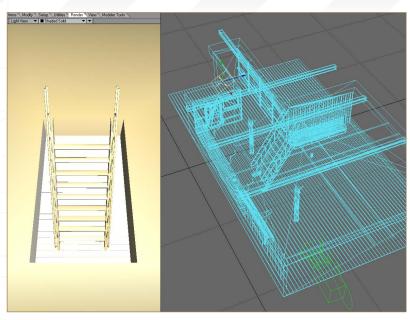


Fig 04

4. The placement of the Sun determines the mood of the scene. I placed the Area Light directly above the entrance of the stairway.

The angle should be rather low, as the scene is supposed to be set in the afternoon. I chose the placement of the light to be on the left side, shining down the stairway, so that the light shines right into the room. Because the light shines onto the stairs, it also throws their shadow onto the ground (Fig04).

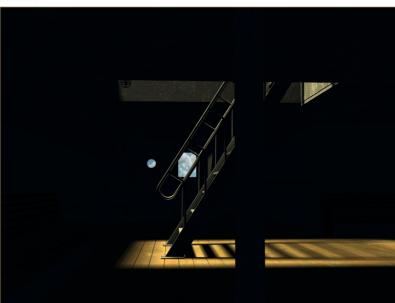


Fig 05

5. Now make a test render to see what we have achieved with this single light. The scene is almost black; only the bright light from the sun shines in from the top (Fig05).

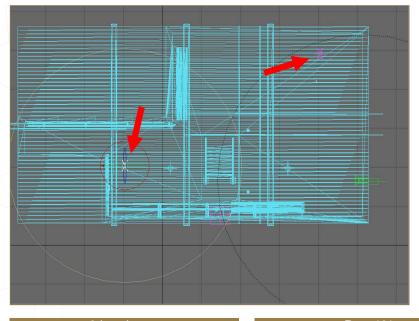


Fig 06

6. What is crucially missing here is the visibility of the scene itself. So, we need to bring in more light. Add 2 Point lights; one for light that comes through the side window and the door (called Fill), and another one to simulate diffuse light in the dark part of the room (this one is called Shadow). As you see, both lights are inside the room and only serve to brighten up certain areas, like the Ambient light (Fig06).



Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

7. The Fill lights is given a light orange colour, as it is supposed to be the same sunlight as from above. It has a Linear Falloff Range of 6 metres, which is the space between the window and the wall where the camera is. The Shadow light is given a very light blue colour (almost white). The Intensity Falloff is set to Inverse Distance and the nominal range is 3 metres. This makes the light very strong across the whole room. The intensity for both lights can be the default (50%), and we can change this later on. The Shadow Type is currently turned Off (Fig07).

Fig 07

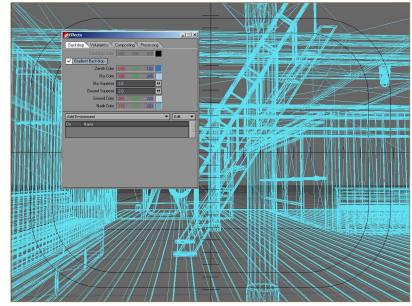
Light Properties		Light Properties	
Clear All Lights	Lights in Scene: 3	Clear All Lights	Lights in Scene: 3
Ambient Color	000 114 240 E	Ambient Color	000 114 240 E
Ambient Intensity	5.0% ◆ E	Ambient Intensity	5.0 % ◆ E
Current Light	Shadow	Current Light	Fill
Light Type	Point Light 🔻	Light Type	Point Light ▼
Light Color	232 241 255 E	Light Color	255 185 E
Light Intensity	50.0 %	Light Intensity	50.0 % ◆ E
Intensity Falloff	Inverse Distance	Intensity Falloff	Linear -
Range/Nominal Distance	3 m ◆ E	Range/Nominal Distance	6 m • E
Basic Shadows Object	ts	Basic Shadows Object	s
✓ Affect Diffuse	✓ Affect Specular	✓ Affect Diffuse	✓ Affect Specular
✓ Affect OpenGL	Affect Caustics	✓ Affect OpenGL	Affect Caustics
Lens Flare	Lens Flare Options	Lens Flare	Lens Flare Options
Volumetric Lighting	Volumetric Light Options	Volumetric Lighting	Volumetric Light Options
Linear/Area Light Quality	4 ⊕ E	Linear/Area Light Quality	4 DE
Spotlight Cone Angle	30.0°	Spotlight Cone Angle	30.0°
Spotlight Soft Edge Angle	5.0° DE	Spotlight Soft Edge Angle	5.0°
Projection Image	[none]	Projection Image	[none]
Projection Image	[frone]	Projection Image	[none]

8. Make a test render again. It's much better this time! Now you can see some details of the room, whilst the sunlight is still a key element. The principal mood is already what we're looking for, but right now the scene doesn't look very realistic and you can easily distinguish the 3 different lights that we have placed in the scene (Fig08).

Fig 08



9. We are now going to use Radiosity to make a transition between the light sources, and also to create the diffuse light that we would have in a real life environment such as this. We also need a bright background for the Radiosity to work, so go to Backdrop and create a Gradient. I am using bright blue colours here, as you would have these on the sea – which fits in with the boat concept. Blue is also a good contrast to the orange colours that we have used for the Sun (Fig09).



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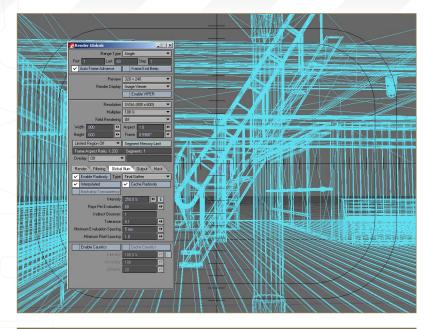


Fig 10

10. Go to Render Globals, click on Global Illumination and check Enable Radiosity. Type should be set to Final Gather. Make sure you check Interpolated and Cache Radiosity. The Intensity should be fairly high - 250% is a good value. We use 60 Rays Per Evaluation, Tolerance of 0.1, Minimum Evaluation Spacing of 5mm, and a Minimum Pixel Spacing of 1.0. Leave the Indirect Bounces to 1 for the time being (Fig10).

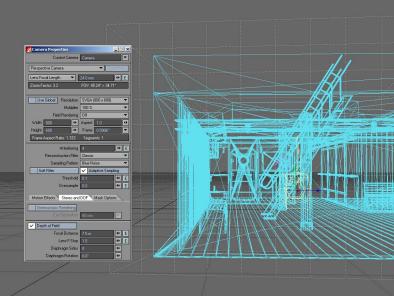


Fig 11

11. We should check the Camera Settings now, as they influence 'render time verses quality' as much as the Radiosity settings itself. The camera I used here is a Perspective Camera, with its Anti-aliasing Level set to 4. Adaptive Sampling should be checked, and the Threshold should be 0.1.

If you want, you can use the Depth Of Field, too. Set the Focal Distance to 7.5m, because this way the stairway is in focus and sharp, whilst the rest of the scene which is out of focus becomes a little blurry. The Lens F-Stop should be set to 1.5, as this setting moves the point that is out of focus closer to the point that is in focus. The lower this value is, the more obvious the Depth Of Field will become (Fig11).

Fig 12

12. Again, make a test render. This is now starting to look really good (Fig12).



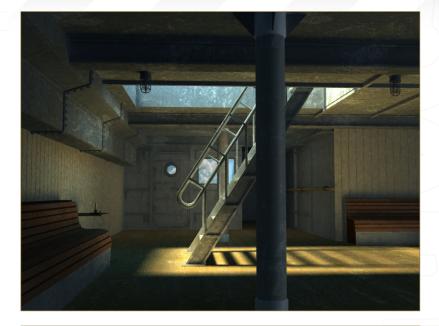


Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

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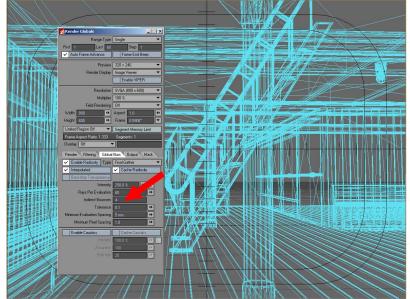
13. For my personal tastes, the scene is a bit to bright, here. You can correct this by making the Fill and Shadow lights less intense. An Intensity of 25% for both lights looks a little more interesting and realistic. Make a test render. If you assume that above the room there is another deck with a small roof, or some walls that block some of the sunlight, then this scene looks quite realistic and interesting now (Fig13).

Fig 13



14. Depending on your personal tastes, if you would prefer the room to be lit brighter, then all you need to do is to go back to the Global Illumination panel and set the Indirect Bounces to a higher level - 3 or 4 are good values for quality, however be aware of the much longer render times when compared to level 1 (Fig14).

Fig 14



15. The result is worth the wait. We got a very smoothly lit and warm looking room, just like sunlight on an afternoon shining in through a window - almost perfect (Fig15).



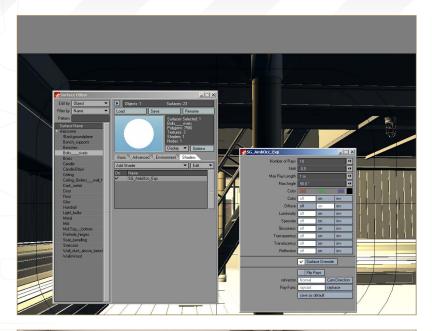


Fig 16

16. For almost every scene you render it is always a good idea to render another Ambient Occlusion Pass. This is done here by rendering a black and white image that is multiplied onto the normal render. In Material Editor, add the shader "SG_AmbOcc_Exp"* to all of your surfaces. You can leave all settings to the default value. Disable Radiosity for the render (Fig16).

*Note: SG_AmbOcc_Exp is a free Ambient Occlusion Plug-in that you can find and download via the great www.flay.com database.

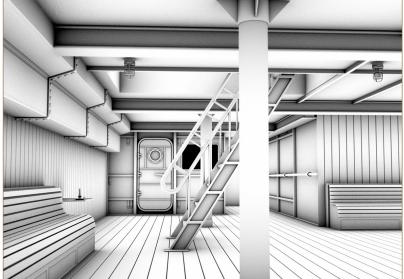


Fig 17

17. On our rendered image, all corners, edges, and other places that are hard to reach for light rays, are darker, and places where light could shine on freely appear white (Fig17).

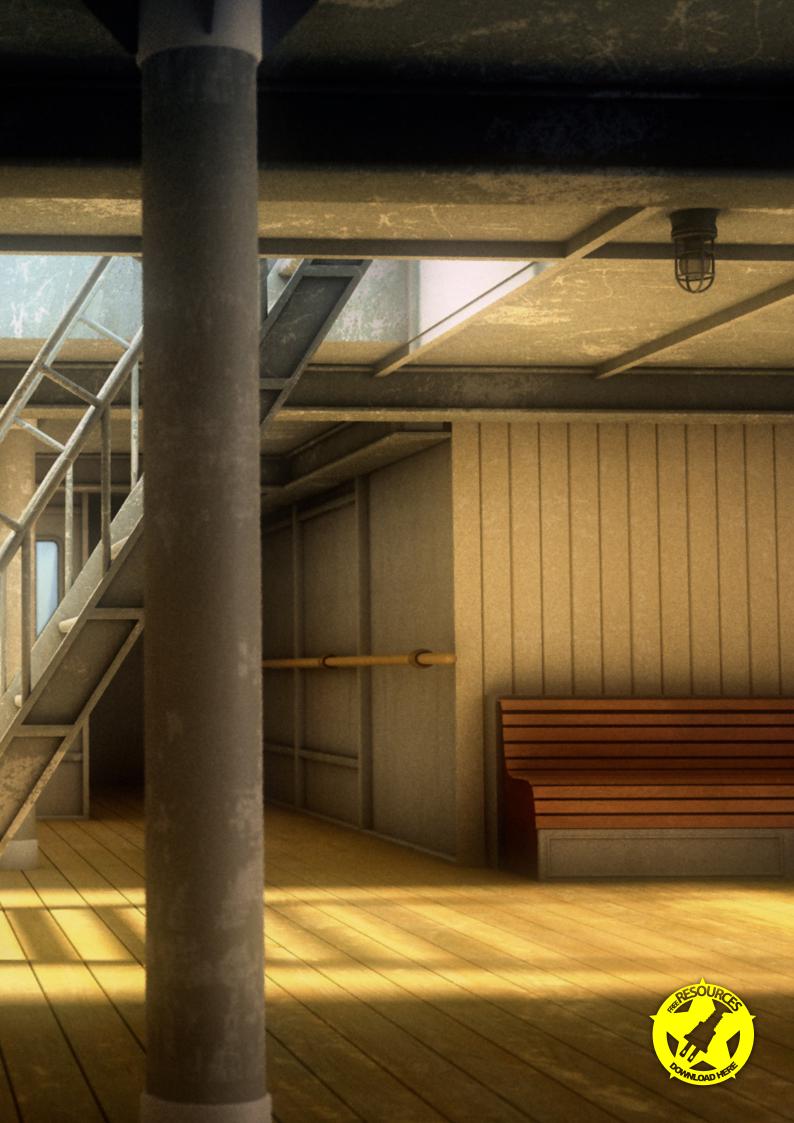
You can now use Photoshop, or any other Image Editor that supports layers, to add this Ambient Occlusion pass as a second layer to your normal render (I used Fig15) and changed the Blending Mode to Multiply. Change the opacity of the layer to your requirements (e.g. 70%).



Fig 18

I think our scene now looks very nice and very sunny this way. I now feel comfortable calling this scene complete (Fig18).







3D environment lighting



Apologies to all of our Maya readers this month; we are unable to bring to you the first part of the 3D Environment Lighting Tutorial in this issue, but please don't worry as we will be featuring the first TWO parts for Maya in the next issue of 3DCreative Magazine!!

'3D Environment Lighting' is our new 6-month tutorial series. Over the course of the next six months, this series will be detailing techniques on lighting an environment under a number of different conditions. Each month we will cover a step-by-step guide to setting up lights, aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light, and finally a submerged submarine light. The schedule is

Issue 023 July 2007

Natural Exterior Lighting Sunny Afternoon

Issue 024 August 2007

Natural Exterior Lighting Twilight

Issue 025 September 2007

NATURAL EXTERIOR LIGHTING MOONLIGHT

Issue 026 October 2007

Artificial Interior Lighting

<u>Electric</u>al

ssue 027 November 2007

ARTIFICIAL INTERIOR LIGHTING
CANDLELIGHT

ssue 028 December 2007

Artificial Exterior Lighting Underwater



3D environment lighting

SOFTIMAGE XSI

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Enjoy ...

Natural exterior lighting Part 1: Sunny Afternoon

Welcome to the first part of this new set of tutorials. This month, we'll take a look at how to set up "sunny afternoon" lighting for our 3D environment. Before we start, I suggest we find some good reference material for our project. In Google, simply Search Images for "sunny afternoon" to discover some pictures which will give you an idea as to how light behaves at this time of the day. Even better, why not just go outside and examine how the light is behaving in the real world? ...

Let's start by taking a look at our scene.
 Open the Ship Cabin_Part1_Starting.xsi
 scene (download can be found at the end of this tutorial; click on the Free Resources logo) (Fig01).

Examining the 3D scene, we can see that there are three main light sources, marked in red in Fig01; the large opening in the ceiling, the small circular window, and the rectangular window on the back wall. We won't consider the artificial lights in the scene, as they will be covered in following parts of the tutorial.

- 2. If you try to render the scene now, you will notice that it's all black, since there are no lights in the scene. So, let's start creating the sunny afternoon light rig... Create a new Spot light and position it as shown in Fig02. Use the B shortcut key, with the light selected, to interactively change its cone (left-click the mouse on the cone to make it either bigger or smaller).
- 3. Open the Spot's property page and change its colour to a very bright yellow. Also change its Intensity to 2. Enable the Shadows option and set its Umbra value to 0 (Fig03).

Fig 01

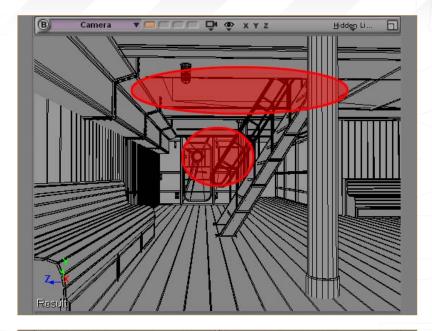
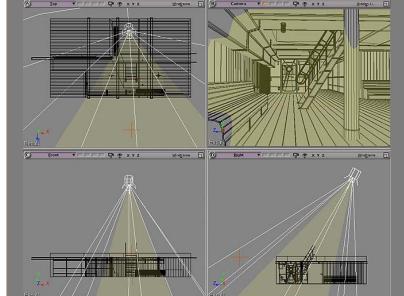
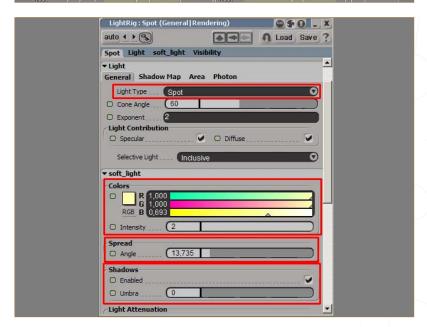


Fig 02





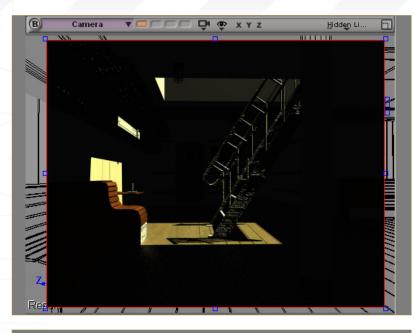


Fig 04

4. Do a quick Render Region test to see what happens (Fig04). Now we have the main light source (the Sun) entering from the opening in the ceiling and casting shadows into the ship's cabin.

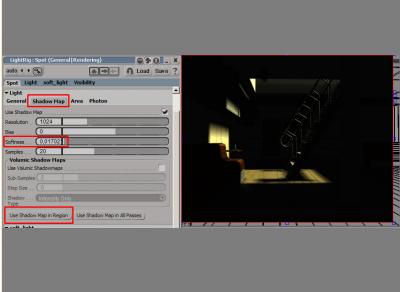


Fig 05

5. Switch to the Shadow Map tab in the Spot's property page and enable the Use Shadow Map option. Click on the Use Shadow Map in the Region button and increase the Softness value as shown in Fig05. Refresh the Render Region again.

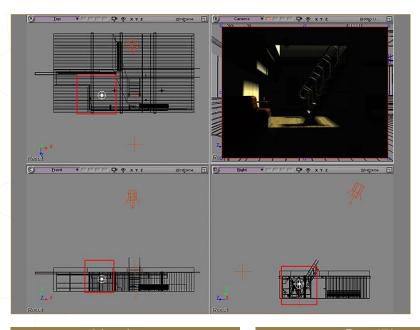


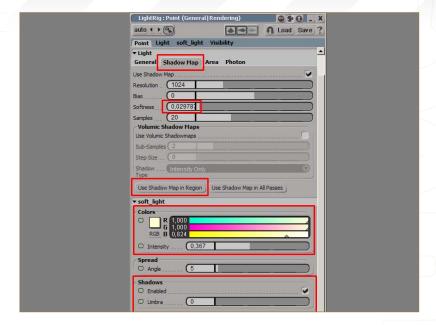
Fig 06

6. Now we need some more light in the back of the room, near the two small windows. Create a Point light and position it as shown in Fig06.

Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

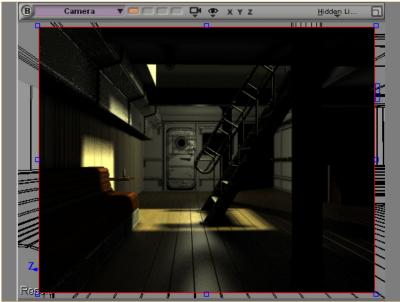
7. Open the Point light's property page, set the light Intensity to something like 0,3, and change its colour to the same bright yellow as before. Enable the Shadow Map just like we did for the Spot light earlier on (Fig07).

Fig 07



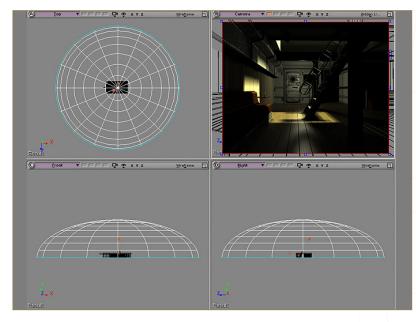
8. Render the scene again. You should get something similar to Fig08. Now there's also some light in the back of the room, but it's still too dark. We need to use some indirect illumination to create bounces of light all over the room.

Fig 08



9. Create a PolyMesh sphere that surrounds the whole scene (Fig09). Select the lower half of the sphere and delete it. Select all the remaining polygons (from the top of the sphere) and Invert them to make them pointing inwards.

Fig 09



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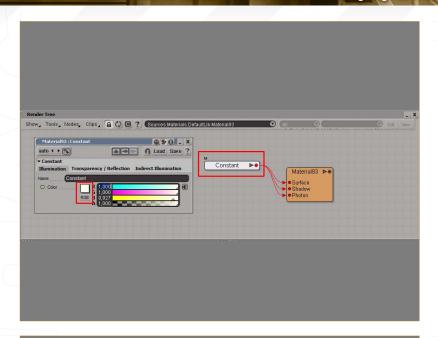


Fig 10

10. Open the Render Tree and create a new
Constant type material. Change its colour to a
very bright yellow and assign it to the Sphere in
the scene (Fig10).

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Fig 11

11. Open the Render Region property page, switch to the Final Gathering tab and enable it (Fig11). Enable the Preview option to have a quick feedback while it is rendering the FG solution, and set the Accuracy to a low value (like 50) for the time being. Refresh the Render Region. Now there's much more light than before, and the FG solution takes into account

assigned to the outer sphere.

both of the lights and the Constant material we

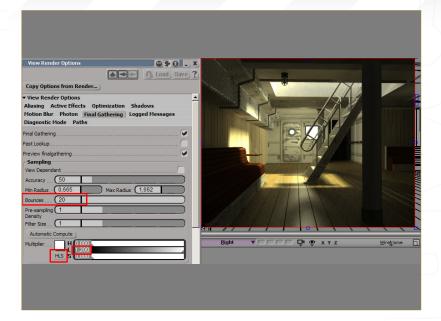
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12. Increase the Bounces' value in the Final Gathering property page and render again (Fig12).

Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

13. Set the Bounces to a higher value, like 20, change the Multiplier mode to HLS, and set the L (Light) value to something like 1,2. Render the scene again. Now there's much more light all over the room (Fig13).

Fig 13

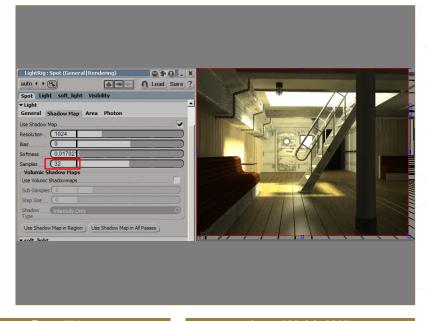


14. If you still want more light, increase the L value to 2 and render again (Fig14).

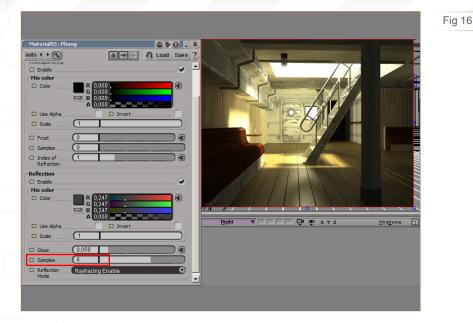
Fig 14

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15. Once you are happy with the lighting, it's time to increase the overall quality of the render. We need to get the final image into Photoshop for the compositing task, so we should get everything set for the final render. Increase the quality of the Shadow Maps (for both lights) by increasing the Samples value (Fig15).



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16. Select the floor object and use the 7 shortcut key to open up the Render Tree. Refresh the
Render Tree to make it show the floor material.

Double-click on the Phong node, switch to the
Transparency/Reflection tab, and increase the
Samples value for the Reflection. Render the

scene again (Fig16).

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17. Now let's take care of the Anti-Aliasing problem. Open the Rendering property page and switch to the Aliasing tab. Change the Filter type to Mitchell and set the Min/Max Values to -2 and 1 (Fig17).

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18. Now we have to set up the final render.

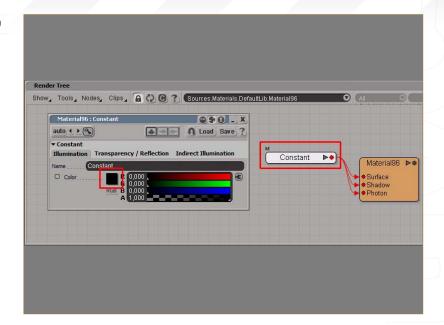
Later we will import it in Photoshop (or a similar 2D application) for post-production and compositing work. However, before we can do this, we need to improve some more parameters. Open the Final Gathering property page and increase the Accuracy as shown in Fig18. Also, click on the Automatic Compute button to have some quick values for the Min/Max parameters. If you don't like how the final FG solution looks, you will have to play a little with these two parameters to increase the quality. Render the scene again (this time it will take longer) and save the final rendered image.

Fig 18

Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

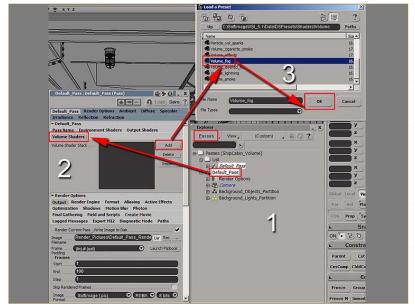
19. Now open up the Ship_Cabin_Starting.xsi scene (the one without lights). Open the Render Tree and create a new Constant material. Set its colour to pure black and assign it to everything in the scene.

Fig 19

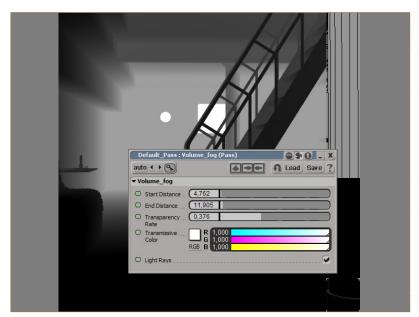


20. Now open the XSI Explorer and change its scope to Passes (number 1 in Fig20). Double-click on Default Pass to open its property page (number 2 in Fig20). Switch to the Volume Shaders tab and click on the Add button. Select Volume Fog from the browser (number 3 in Fig20) and click OK.

Fig 20



21. Open the Volume Fog parameters and copy the values from Fig21. Render the scene again and save the Fog pass as a picture.



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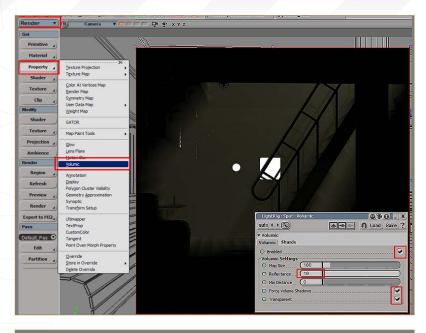


Fig 22

22. Now open the scene with the lights (make sure that FG is disabled as we only need the direct illumination for this task). Select the Spot light from the Explorer, switch to Render mode and assign a Volumetric property to the Spot (Fig22). Copy the parameters which are shown in Fig22 and render the Volume light pass. Save it as a picture and import everything into Photoshop, or a similar 2D software.



Fig 23

23. Open the final rendered image. Duplicate the original layer, name it "B&W Copy", and desaturate it (Fig23).

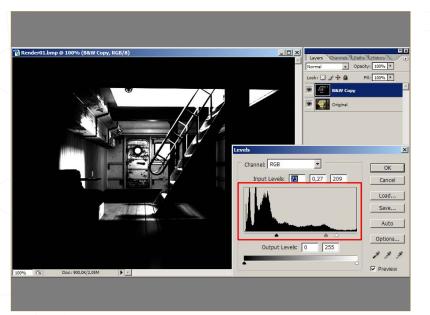


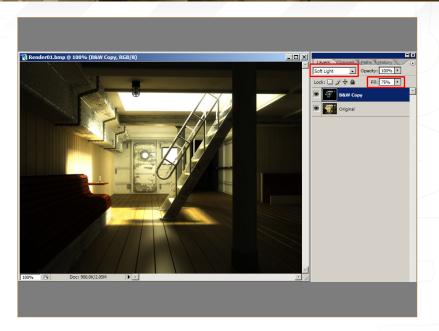
Fig 24

24. Adjust the image Levels until you exaggerate the areas with more light (Fig24).

Natural Exterior Lighting Part 1: Sunny Afternoon 3D ENVIRONMENT LIGHTING

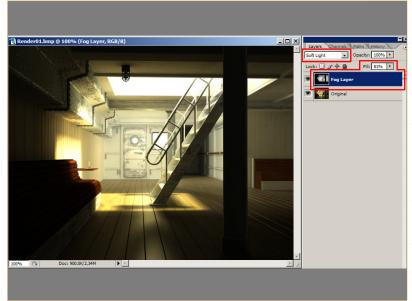
25. Change the top layer blending mode to Soft Light and decrease its Fill to 75% (Fig25).

Fig 25



26. Now import the Fog pass and put it above all the rest. Change its blending mode to Soft Light and its Fill to about 80%. If you want, you can colourize it slightly to make it warmer (Fig26).

Fig 26



27. Import the Volume pass and put it above all the rest. Set its blending mode to Screen and decrease its Fill to 42%. Colourize it to make it warmer and more blended with the rest of the picture (Fig27).

If you want you can adjust the Exposure of the image to make it darker or brighter - it's up to you and the mood you want to give to your render.

